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Mac ADDICT

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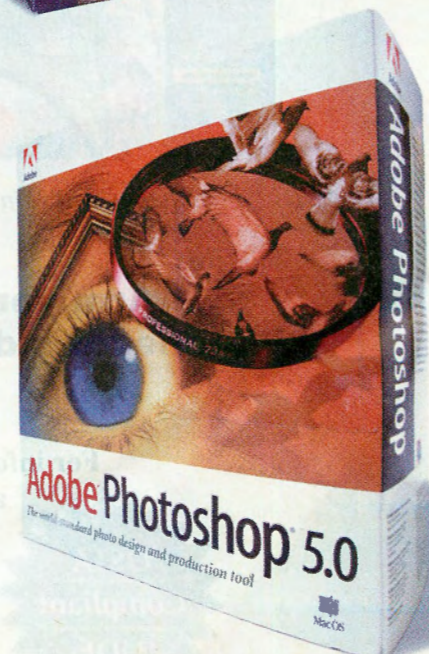
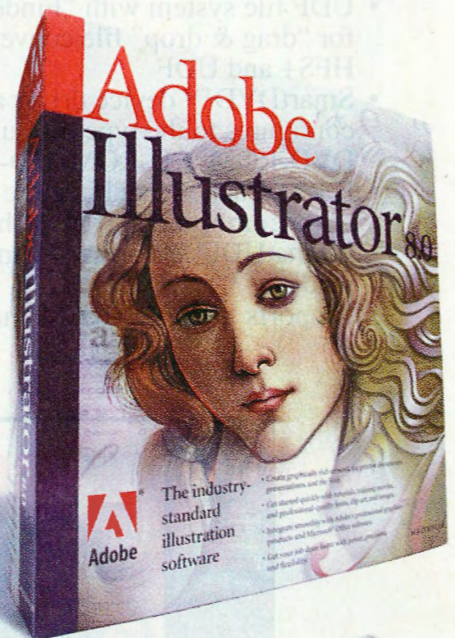
If you've ever read one of our graphics features or how-tos and sighed longingly at the pages as you tried to doodle along on your Fun Pad with your dull Number Twos, we're about ready to put you out of your misery.

No, we're not adding you to Prison Guy's hit list. And we're not going to force-feed you any of *PC Gamer's* semipoisonous Goldfish crackers. We would never be that cruel...well...not to your face, anyway. Rather than have you, our poor readers, troll away at the arts using the tacky techniques of yesteryear, we're giving one lucky winner a new lease on life with a free graphics studio courtesy of Adobe Systems!

By graphics studio, we don't mean a loft in the Village, a flat in Florence, or anything with four walls and running water, for that matter. No, we're giving away two tools every professional artist should starve to own—complete, working copies of Adobe Photoshop and Adobe Illustrator worth over \$1,000 dollars!

All you have to do to win is send your name, address, phone number, and a pencil drawing of your favorite cliché (check out the "Great Graphics Cliché Giveaway" on page 28 for some design inspiration) to Win, Lose, or Draw, c/o Nikki Echler, *MacAddict*, 150 North Hill Drive, Brisbane, CA 94005. All entries must be received by June 30, 1999. We will base the winner on the luck of the draw, at our whim, and for no real good reason. Don't call us, we'll call you, yaddah, yaddah, yaddah.

I meant to say that.



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JUNE 1999

highlights

Mac ADDICT 34

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WHAT ARE YOU GONNA DO ABOUT IT?



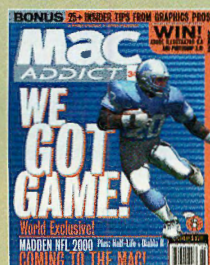
I SWEAR I WASN'T GOING TO TOUCH
THE SANDWICH! IT'S YOURS!



FOR MY NEXT TRICK, I'LL RESTART AN
IMAC WITHOUT A PAPER CLIP!



BILL'S ATTEMPT AT PLAYING THE KEYBOARD
WENT UTTERLY, HORRIBLY WRONG.



FIRST IN A SERIES—
COLLECT THEM ALL!

20 We Got Game

The Mac gaming market is about to explode with a slew of hot Mac titles, new-to-the-Mac developers, and simultaneous platform releases! In our preseason exclusive report, we give you the stats on all the major industry players and fill you in on their secret game plans.

BY ROBERT CAPPS

28 The Great Graphics Cliché Giveaway

We're such a sneaky bunch! This month we tricked three professional artists into revealing their trademark illustration secrets, then turned around and printed them as step-by-step how-tos complete with screen shots! What else would you expect from a former Prison Guy?

BY ROBERT CAPPS

36 XXIII Reasons You Should Care About Mac OS X Server

OS X Server—why should you give a rat's behind about it? We brief you on Mac OS X Server's selling points, show you how it differs from Mac OS X, and dish all the dirt you need to know about the latest addition to Apple's system software family.

BY MARK SIMMONS

44 OH #%@*!!!! What to Do When Undo Just Won't Do

Oops! Why me? D'oh, not again! Whether you just launched the wrong app, lost all your bookmarks, or trashed vital extensions, we can help you right your wrongs. We've got more than 30 quick fixes for your most bonehead boo-boos, so dry your tears, quit shouting, and for goodness' sake stop shaking that monitor!

BY KEVIN SAVETZ

how to

72 Build Interactive QuickTime Movies

Think you need Macromedia Flash to make cool interactive animations and rollovers for a Web site? Think again, bucko! Couple QuickTime with Totally Hip Software's LiveStage and you're ready to, um, roll.

BY MARK SIMMONS

REPRINTS

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Volume 4, Issue 6

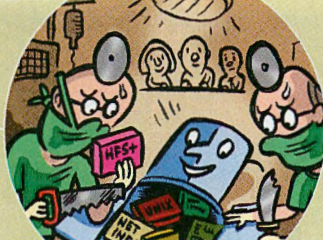
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Mac
ADDICT 34
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every month

8 Editor's Note

It's been a hell of an issue—we'll tell you all about it.

10 Letters

Funny? Serious? Funny? Serious? You just can't decide, can you?

14 Get Info

We perform a little exploratory surgery on the open source movement, voyage into space with Motorola, hail an iCab, and figure out how to turn off all those annoying "helpful" features.

18 Scrapbook

What's the well-dressed Mac addict reading these days? Peruse our snapshot of an Apple-obsessive bookshelf and pick out some summer reading.

50 Reviews

Does Virtual Game Station steam up PlayStation games on your Mac? Will Klingon Honor Guard make your blood boil hotter than a dishonored Klingon's? We answer all these questions and more as we pass judgment on 14 products, including Adobe After Effects 4.0, Kai's Power Tools 5.0, Dreamweaver 2.0, and MacLinkPlus Deluxe 10.003.

76 Ask Us

Some say Owen W. Linzmayer has gone insane. Others say he's just overworked. Either way, he's got the answers to your questions! This month he resolves your printer problems and upgrade issues, and even puts an end to your Power Mac identity crisis.

104 Shut Down

We poke fun at everyone, even ourselves! Ouch, that hurt!



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Our goal is to feed your passion with the greatest magazines, Web sites, and CD-ROMs imaginable.

We love to innovate, we love to have fun, and we have a cast-iron rule to always deliver spectacular editorial value. That means doing whatever it takes to give you the information you need. With any luck, we'll even make you smile sometimes....

Thanks for joining us.

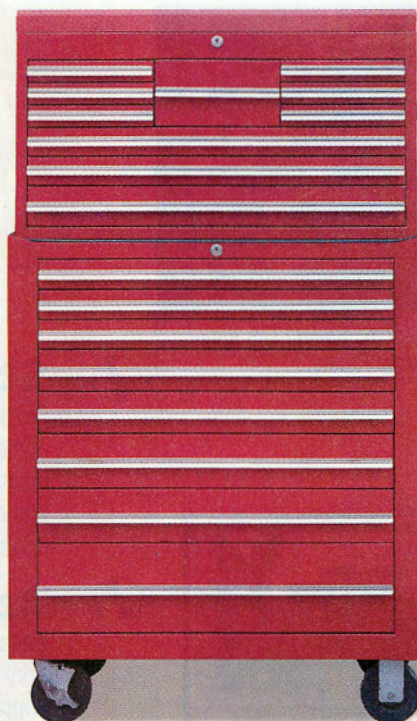
It was a long time coming. Goodbye, Jeff—we'll miss the donuts! No Turkish prison camp—this time.



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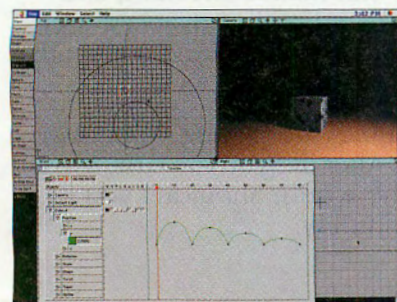
the disc



RYAN? ARE YOU RYAN? I'm looking for Private Ryan...



THE BUILDING IS REAL, but the chaotic effect is digitized.



IT BOUNCES, IT ROLLS, but can you make it say "Moo"?



This Summer Get Your Golden... highlights

Starcraft Demo

Death, damage, destruction, deceit: How much of a beating can one army (or one Mac addict) take? Put your brain and brawn to the test in this power struggle among three unique species—Terran, Protoss, and Zerg. This dastardly demo version puts you in command of the Terran race as you lead your evil army to victory over your enemies. Roll up your sleeves—it's time to take back the galaxy!

Adobe After Effects 4.0 Tryout

Dancing film titles, talking pigs, exploding skyscrapers...ever sit in a movie theater or in front of the tube and wonder, "Gee, how'd they do that?" When it comes to creating eye-popping visual effects and powerful motion graphics, After Effects 4.0 will have you walking on water. You can become the next screen queen (or king) by creating complex special effects and broadcast-quality graphic animations for film, video, multimedia, and the Web.

Pixels 3D Studio 2.1.4 Full Program

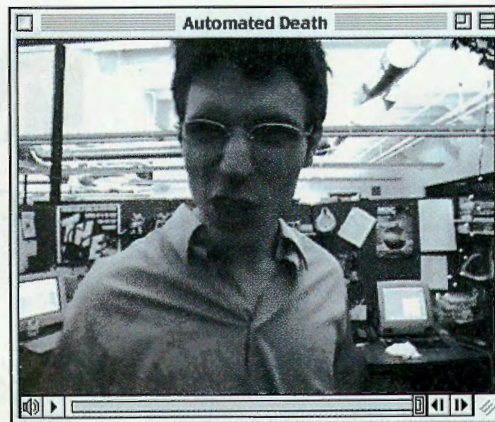
We gave you a little taste of this delicious dish back in our November '98 issue, but this month we're giving you *all* the ingredients. We've got your full-working version right here. Pixels 3D Studio is a professional 3D graphics and animation package that lets you build and mold intricate models, create realistic motion, and render your work into professional-quality animations. We're giving you an entire set of tools, plus manuals, tutorials, exercises, free stuff, and more. We'll leave the inspiration to you.

AudioFusion TWS 1.0.1

Check it out! Set up your own rave party using your Mac, some serious speakers, and AudioFusion TWS. This cool package will turn your Mac into a full-fledged techno workstation. Track up to 30 loops in real time, use the sound synthesizer to generate new instruments, and set up to 20 grooves with the rhythms box. Flex that booty muscle and get ready to shake your thang! Work it, baby...



AND IT goes to 11!



Heeeeeere's Jeffy! When we last left you, an evil AppleScript had killed Nikki, Adam, and Ken. Poor Jeff's brains got fried, but he miraculously survived. Find out what other perils await—and everyone else's fate—in the exciting conclusion to *Automated Death*.

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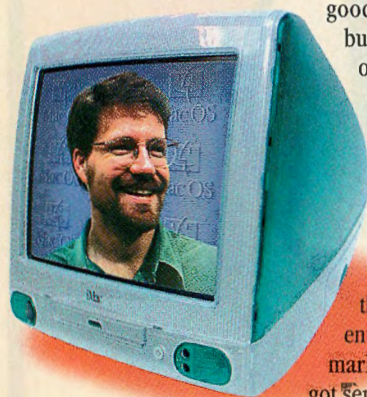


editor's note

Whether we admit it or not, computer games are big business.

This month's cover story would have been an embarrassment to try last year at this time. In fact, it probably would have been impossible. There were a few folks who never left the Mac—Bungie and MacSoft come to mind, and thank goodness for them—

but for a while, the only gaming news we had to report was that we were still playing Myth and that a couple of cool shareware games were coming out. Remember, this was before any enthusiastic consumer marketing, before Apple



got serious about courting game developers, and most important, before the iMac. But all that's changed—now we've got game, baby!

For the first time, a major sports game is coming to the Mac (at the same time as its release on the PC, no less), and that's great news for the resurgence of the Mac. Just think of the state of Mac gaming as the frog in the grand Mac ecosystem. In nature, the frogs are the first things to die off when the environment turns hostile, and one supposes they are among the last to return when things get sweet again. Well, things are getting sweeter every day.

Computer owners who claim they've never played a game on their Mac or PC are probably lying, plain and simple. Games sell computers. People don't buy games to run their computers, they buy computers to play

Just think of the state of Mac gaming as the frog in the grand Mac ecosystem. In nature, the frogs are the first things to die off when the environment turns hostile, and one supposes they are among the last to return when things get sweet again. Well, things are getting sweeter every day.

games. After all, once you have a good word processor, Web browser, email client, finance software, and a couple of utilities, you're set—except for the steady stream of games you'll want to make your computing experience complete.

That's why games are important to the Mac's health, and that's why it's encouraging to see a plethora of games on the way. Games differ from productivity software in a fundamental way. Unlike productivity software, which you use over and over to do specific chores, games are time-wasters, rather like movies. And as is the case with a movie, you can play a game only so many times before you get sick of it—then it's time to buy a new one. So gamers need a steady stream of new games, or they'll go where they can get their fix, buying PCs or PlayStations instead of Macintoshes.

Games also push hardware to its limits, ensuring that Apple stays honest in creating faster and better Macs. Without these pressures—the sheer size of the gaming market and the hardware demands of those folks—the only people who would care much about the new G3 towers with their fancy-schmancy Rage128 chips would be graphic designers, an important market, but hardly the entire computing world. Instead, anyone with a hankering to see Unreal the way it was meant to be seen suddenly also has a hankering to scrape together \$2,000 for a new G3 tower and its new graphics chip. The hardware combination is compelling enough to get John Carmack—a sometimes vocal Mac critic and the powerhouse behind some of the most incredible games ever, such as Doom and Quake—to come onstage, live, at Macworld Expo and say the Mac looks like a great gaming platform. Now *that's* encouraging.

We've been covering games since we launched *MacAddict* in 1996, and we've wasted many an afternoon with rocket launcher in hand. We play games, we like games, and now that game companies like the Mac again, we're pretty happy! To those game developers who stuck with the Mac through The Troubles, thank you. And to those of you returning (or coming to the Mac for the first time), welcome.—David Reynolds

A Slew of Thanks

I've been away from the *MacAddict* farm for a few weeks celebrating my honeymoon—no need to send thanks, just gifts—and during my absence many people have come through with hard work, energy, and enthusiasm. Since this is my party and I'll say what I want to, I'm giving my heartfelt thanks to them.

First, thanks to the staff at *MacAddict*: Nikki, Ken, Rob, Kris, Mark, Adam, Jen, Jeff, and Cheryl. We run pretty lean here, doing a lot with a few people, and when one of us goes island-hopping in Greece, it means that the sorry saps who stay behind have to pick up the slack. Folks around here did that admirably, especially in arranging, writing, editing, and designing this month's kick-ass gaming exclusive. Great job, folks—I'm proud to work with you all.

Second, thanks to Niko Coucouvaris, our interim Webmaster. Niko has been working with us since last September on *MacAddict's* Web site, and he's been doing a fantastic job. Starting this month, you'll see Niko's name on our masthead as recognition of his skilled work. As part of that labor, Niko has created a discussion board where fellow Mac addicts can meet and talk, and he's recruited several volunteers to help out as moderators. Thank you to those folks for their hard work as well: Amoreena Farrell, Jerry McCready, Sam Reisner, Brad Stewart, Nick dePlume, Bryan Dick, Joey Cooper, Ryan Mantle, Jonathan Claydon, Sara Rosera, Nate Strauch, Cedric Berndt, Jay Zehngelot, John O'Donnell, Scott Skinner, and Lance (aka Mocos De Vaca, ewww!). Thank you all for your help, and if I've missed anyone, I apologize—things can change between the time we write things and the time they appear in print.

Finally, we're bidding a sad farewell to our managing editor, Jeff Titterton. Jeff's been at *MacAddict* for about a year now, and in that time he's become a vital part of the team, showing talents and abilities that surprised us all—from copy editing to creating two-page graphics, from writing quick and witty items for the magazine to fetching donuts each and every Wednesday. We'll miss him, and we wish him luck.—DR



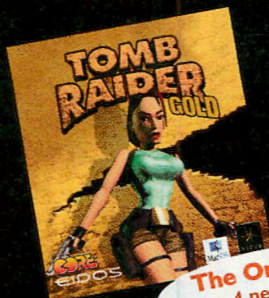
SWF, tall, athletic, Brunette, quite proportional. Looking for partner in gameplay. Must like adventure, international travel and exploring ancient ruins. Hobbies include swimming, motorbikes and kicking warrior-monk butt. PC fancy boys need not apply. Call me today!

A/M needs love

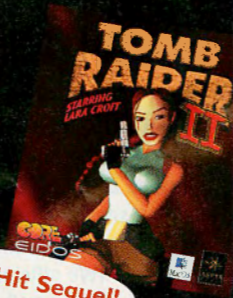
This ain't no moonlit walk on the beach, it's a double date with danger! Tomb Raider Gold combines the original Tomb Raider with four massive, new worlds and levels. Explore ancient ruins and solve complex puzzles in your adventures through Atlantis and the Lost City of Khao Moon. Then, try out Lara's saucy, new moves and arsenal of weapons in Tomb Raider II, as she continues her quest through Tibet, Venice and the Great Wall of China.

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WHATEVER YOU SAY...

Hey! Don't you dare change the *Letters* section into some serious (lame) reader platform! That section is the only bit of fun I have left in my dull life! I have to spend eight hours a day behind a Windows NT workstation, programming a mainframe. If you suck the fun out of *Letters*, I will sell my PowerBook G3, tell my grandma to buy a Compaq, start using the ThinkPad my employer gave me, and tell all those relatives who ask me what computer to get that Macs suck! Now get me a date with a Power Mac G3/400, and send me a brand-new Kathy Tafel!—JOOST VAN DE GRIEK

Sorry, all of our Kathy Tafels are currently out of stock. Can we place her on back order for you?

You like serious letters better than silly ones...don't you, Dave?—HAL 9000

Congratulations on your bold decision to get at least partially serious on your *Letters*

Recently Sighted

What? You didn't get our postcard? OK, well here's what it said: "Cozumel is great, the weather is perfect, and all of us Mac addicts are having a blast snorkeling, swimming, sightseeing, and taking full advantage of the free drinks at the hotel. (We officially rated the piña colodas *Freaking Awesome!*) Cheryl got to swim with the dolphins, Mary got licensed to dive, and Rob got the flu. Oh, and we got a lot of work accomplished...yeah. Wish you were here!"—The MacAddict Staff

page. A little silliness is fine and fun, but lately reading this page has been like listening in on the conversation of a group of preadolescent technogeeks.—CHRIS TURKEL

CARRY IT ON YOUR MACHEAD

I purchased a PowerBook G3/292 (I was one of the first people to have one!) and since I got the heavy 7-pounder, I have gone through four different ways to carry the thing. Baggy Excessus is the new disorder I suffer from. Now, after almost a year of ownership, the thing weighs more than 15, yes, 15 pounds. Where can I get some software? Please help me before my MacBack and MacArm give out.—BRIAN T. LONG

IT'S THE QUICKIE FIXER-UPPER

All the "Quickie Questions" ("MacAddict Advice Guide," Apr/99, p18) made sense (or at least didn't require an explanation), except the advice *not* to partition a hard drive. I have had four partitions on my Power Mac G3/266 (system, applications, documents, and backup), working on the basis that the partitions open faster and if I have a crash I won't wipe out everything. Of course, that means four directories can become corrupt (just what the hell is a B-tree?), so maybe I just answered my own

question. But what's the real reason? Sorry about a serious letter—it goes against my grain!—PAUL J. GALANTI

Man, are we sorry for all the confusion on this one. The "Quickie Questions" section targeted the average user, whose hard drive weighs in at less than 4GB. Any user with a hard drive this small probably won't experience allocation block problems, thanks to HFS+, and therefore won't need to bother with partitions. For more information, you can check out Maria Langer's full explanation at <http://www.gilesrd.com/mlanger/articles/quickie.html>.

TRY SENDING IT TO [HTTP://WWW.GIVEITUPALREADY.COM](http://WWW.GIVEITUPALREADY.COM)

I'm really disappointed about your "Special Dream Scheme Survey" (Apr/99, p1). I mean, it's everyone's dream to make their own iMac. And just think, I was one of only 100 lucky subscribers to get it! But you guys made a big mistake. See, I spent hours and hours coloring it in, and then I sent it to "April Fool!, c/o I've Been Had, Man, I'm a Sucker!" but my mail carrier refused to take it. I'm trying again to see if we get the



GET ON, GET ACTIVE. Talk to us and to other Mac addicts at the Web site.



Photo courtesy of Cheryl England

other mail carrier, 'cause he's a lot nicer. Are you guys sure you got that address right?—MARK BURNS

PERHAPS HE ALREADY HAS

Have you ever wondered how many schools in the United States have been named after Bill Gates? How about after Steve Jobs? Well, I have a



surprise for you. I found a tiny high school up in the mountains of central Mexico in a rural town called Joquicingo that's named Steve Jobs—I'm not kidding! Gee, what an honor! I really hope one day Steve Jobs sends a bunch of old Macs to help the Mexican kids, who actually adore him.—JUAN PABLO MARTINEZ-SORIANO, Ph.D.

WELL, EXCUUUUUUSE US!

There has been just about enough sissy stuff in your videos lately—starting from your lack of PC desecration during the paintball event to the latest lady of the camera running around eating an apple and stealing goldfish! I love them all to death, but enough giggling girls! I want to see Prison Guy show us just how violent he can get with a PC! And for once get a PC with some parts inside. I want action, violence, and bloodshed!—DAVID FLEMING

I regret having to say this, but the staff videos are starting to suck. They've lost their edge. I think you need to ban the chicks (mainly that Nikki one) from making the videos. In the last video, I was sure there was going to be a fistfight when Nikki went into *Maximum PC's* offices, but alas, she wussed out.—ROBERT JAILALL

YOU KNOW YOU'RE A MAC ADDICT WHEN...

...you and your spouse communicate through Instant Messenger when you're in adjacent rooms in the same house.—FRANK McCULLEY

...you were forced to jump rope with a SCSI cable when you were young. Now all the kids are using USB!—SCOTT KNAUER

...your child knows the five primary colors as strawberry, tangerine, lime, grape, and blueberry.—CHRIS FOWLER

...you wonder if Rob Capps went to thinking jail.—CHRIS PERRY

...you tell your guests to be very quiet at a party because your Mac is sleeping.

...you get a bunch of friends together and turn out the lights just to show them your glow-in-the-dark Metrowerks boxers.

—JOHN BOERO

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Macworld
★★★★★



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Sometimes bad things do happen to good computers. Your screen freezes. (Along with the blood in your veins.) Or your 6-months-and-almost-done project is accidentally thrown out with the trash. (Hello?) Or files are mysteriously "corrupted." I just don't have the time to reconstruct my docs, files, bookmarks, fonts, preferences, financials, reports, and e-mail. Do you?

My hard drive just crashed.

Retrospect Express provides automatic protection for everything on your Mac at a no-brainer price. **It's never been easier** to back up your hard drive (and everything on it) to **Zip, CD-R, Jaz,** or even to the **Internet.** With small and home offices among those hardest hit when disaster strikes, the laws of probability guarantee that sooner or later, your number will come up. But for **less than \$49, Retrospect Express** guarantees that you'll be smiling when it does.



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YOU WANT IT? YOU GOT IT!

It's getting harder and more frustrating to defend my superior G3 Mac to my PC friends when all the games I have are already yesterday's news to them. Helloooo!!! Are there any PC game companies reading this magazine? Port more games to the Mac—I have money, cash, dinero! Sell me something cool!—STEVE LESKI

See this month's cover feature. You're welcome.

THERE'S SOMETHING ABOUT JANE



I'm generally not the type to write a letter to a magazine about anything, but when I watched the video from issue 32 I knew that *now* was the time. What caught my eye, you ask? Jane. She looked right at the camera and said "Um, green" (to the question of "What is your favorite iMac color?"). I stopped the movie, backed it up, and played it over and over. There she was again...cute little smile: "Um, green." When will we be able to see more of Jane? Can you give me any particulars about her?—CHRIS RAAB

Jane inadvertently ate some sushi that had been sitting up in the PC Gamer offices since last April and hasn't been seen or heard from since. Any info on her whereabouts should be reported immediately.

ODE TO JOBS

In the Valley of Silicon, his childhood was rough, With computers, for him nothing was tough. Even though he never went to school, Steve Jobs wasn't a silly fool. One friend was Stephen Wozniak, To computer games, boy, did they react! At Atari he worked, But at homebrew computer clubs he lurked.

A personal computer was born In a garage one fine morn.

Jobs and Wozniak were fated And Apple was incorporated. From zero to millions Apple did grow, Making Jobs grin from head to toe.

Jobs then hired Sculley, who became a bully. Out went Steve, And profits did leave. To Apple Steve did return, And from his mistakes, he did learn. iMac takes the market by storm, A PC with new color and new form. Steve Jobs is to the computer industry As whipped cream is to Austrian pastry. —ALINA SHAH

HARSH HAIKU DEBUT

Sorenson codec,
It's highly overrated,
And it is stupid.

I have tried to run your staff movies on several computers ranging from high-end 68030s, several 040s, and three different Power Macs (5300/100, 6100/60, and 5400), all with less-than-reasonable results (sound skips, laughably low frame rates, or both). Not everyone owns an iMac (apparently the only computer that can run Sorenson compressed movies at a respectable frame rate). Please please please go back to whatever codec you were using earlier...I really miss the staff movies.—DAVE BROWZOWSKY

HE'LL CUT YOU, MAN

I know Prison Guy's problem. If you look at the *Letters* (Mar/99, p10) section, you'll see Chia Prison Guy typing on a Chia iMac. Look at his wrist position! He must be in pain and discomfort due to an RSI! This stress led to crime and imprisonment. Let's educate him on the proper typing position! Let's free Prison Guy!—JOHN PLACHTA

WHO ARE YOU AGAIN?

Here are some of the best things I remember about *MacAddict* and its employees:

- Icky Nikki—her Dino Kidz keyboard! Is that thing still around?
 - Mark—do you have a Microsoft T-shirt in a can? Also, Monster Balls, Too Hot for the Disc, and Pikachu.
 - Wade—"It's a Wonderful Mac" is a classic, along with all his other videos. Hey! You guys promised Wade would be making guest appearances every once in a while, and I haven't seen him once!
 - Cheryl—her death threats to Wade.
 - Prison Guy—when he had hair, he looked like Elvis.
- DAVID KLUDT

WHICH IS IT?

In "Getting to Know USB" (*Scrapbook*, Apr/99, p16), Mark Simmons notes that the different connectors at each end of USB cables mean "you never need to fear that the cable is the wrong way around." Like, wow. When has this been a problem? Either cables have different connectors at different ends (as with USB), or it simply doesn't matter which end goes where (as with ADB). The latter design is actually the simpler (and less to be "feared") of the two. Simmons's proclaimed benefit is like saying that the design of trousers eliminates all worry about which end goes around your waist.—K. TRUELSEN

WE'RE JUST GOING TO COUNT TO 10...

I enjoyed your "Ultimate Mac Top 10 Lists of All Time" (Apr/99, p32) very much but am puzzled over one item in your "5 Dumbest Things You Can Do" list. Why is it dumb to install RAM in a Power Mac 9500? Having done just that, I am very curious about your reasons. Please let me know. —BARBARA LINDENBERG

Do you eat Kryptonite for breakfast? Because you're no average human being. Just getting to the RAM in a 9500 is an odyssey of epic proportions that involves removing the machine's power supply and logic board. Most regular folks would be wise to leave that sort of hassle to professionals.

I can't help but feel there is a glaring omission in your "Top 10 Apple T-shirts" list. I speak of none other than my beloved E-World Beta Tester T-shirt. Hey, wait...maybe I'm the only one who has one.—ALYSSA RUHL

In your latest issue, how could you leave HyperCard off the "Top 10 Earth-Shattering Mac Apps" list? Apple may neglect it (I cringe every time I see a PowerPoint presentation), but many people bought Macs to get it, learned how to program with it, and still use it to render personalized applications in the blink of an eye.—DR. ROSS NELSON

GOT SOMETHING FOR THIS RASH?

iMac
Windoze machines all crash, In my opinion they belong in the trash. All Wintels should be smashed, Their chips all G3s thrash. So to the store you should dash, And get an iMac for \$1,129 in cash, Then you will have a computer that runs way fast. —JUSTIN LUDEMAN

TOO LATE, HE QUIT

I absolutely loved your "Ultimate Mac Top 10 Lists" (Apr/99, p32). But when reading the "Top 10 Ways to Know You're a MacAddict Addict" list, the first thing I noticed about "Top 10 Reader Requests" was that the word "typos" was spelled with two T's instead of one. I was shocked—how could you let this slip past? Whoever checked spelling for this article should be fired as soon as you read this.—DAVID FRANKOVICH

WE'RE DOOMED!!!

I'm sorry to have to break this to you, but I was looking over *MacAddict's* lovely layout and I found a horrible bug! Notice the space on the cover where it now says "33"? Apart from invoking a scorching Latrobian thirst for cheap beer, it also has caused me much fear! When you print issue number 100 in the not-too-distant future, this space will no longer be big enough! I realize you're going to have to recall all past issues of *MacAddict* in order to correct the problem, and I sincerely hope you can bear the cost of this error. On the bright side, you may be entitled to government money. I only hope we caught the MIC bug in time enough to limit the damage.—SCOTT LAHTINE

OUR EYES ARE EVERYWHERE

So, do you guys have me under surveillance or what? About five days ago, I finally saw my *Star Trek* dreams realized when I installed several X10 devices in my home, with voice control supplied by my handy-dandy Macintosh (what else?). You can imagine my surprise when I got my *MacAddict* in the mail today and discovered a story about the very same thing! I found this *too* eerie! I guess great minds think alike, huh? Well, gotta go! I think I just saw Prison Guy peeking in my window!—BILL ALDERSON

FEEL FREE

I can't believe people of your supposed "stature" would taunt us iMac users. I open up the latest issue of *MacAddict*, and before my eyes is an article that will enable me to control my entire house (OK, just the lamp) by talking to my computer. My mouth is actually watering as I read the article. But *nooooo*, you guys have to cop out and tell me that just because I have a colored computer, I won't be able to impress my girlfriend (imagine the results of being able to dim the lights...ahem, I digress). Let me tell you something, discrimination of that kind will not be tolerated in this country. You just march your commie butts right back to the

processing room and figure out how it can be done on an iMac, and don't come back until you have. In America, everything is possible, and if I want to tell my computer to dim the lamp, well gosh darnit, I should be able to.—ZACK FISHER

THEY DO LOOK A LOT ALIKE...

As you warned, some people just don't get jokes. Go figure. I guess some people just don't appreciate having the Chime of Death set as their startup sound, or the shutdown file set in the startup items...or both. By the way, do you know how long I thought Max was supposed to be Cheryl?—GARETH SPARKS

WE'LL FIX THAT

Just got word from Dean Renninger; his and Lisa's baby arrived without incident. It's a boy, and he's named Alexander Henry Renninger. He's 19¹/₄-inch long and weighs 7 pounds, 8 ounces, so they're not going to throw him back. No news yet on whether he prefers Macs or PCs.—DAN BENNETT

Congratulations Dean and Lisa!

ADDAMS FAMILY VALUES, MAYBE

I just caught the tail end of this story on the morning news. Microsoft is teaming up with some San Francisco company to make and distribute kits telling consumers how to protect their private information from being disseminated across the Internet without their consent. How ironic is that? That's like Bill Clinton talking about family values.—JIM NEARING

WAIT UNTIL YOU GET OUR BILL

Have you ever thought of being a shrink? I think you should. Why? Well, every time I am depressed, all I have to do is start reading one of your issues. On the first one, I smile a few times. Next one, I laugh a little. By the time I have gone through all 33 issues, I am laughing so hard, I'm crying! You guys are so great! Thanks!—AMANDA DUTTON

DON'T LET THE DOOR HIT YOU ON YOUR WAY OUT

Guys, really, I have to get to page 44 of the editorial to start seeing/reading something I can use. The preceding hoo-ha section is beyond juvenile, and I wonder if your demographics are sending you careening into the kiddieland market. If that's the case, note that one subscriber is ready to pack and move to *Macworld* for the grown-up treatment.—ALFRED ZELZER

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Pushing the envelope with OS X plumbing, beta browsers, and space chips.

Open Season

Apple releases Mac OS X Server source code

The March rollout of Mac OS X Server was a fairly quiet affair, but Apple's simultaneous foray into the open source arena made quite a splash. By releasing the source code for part of the OS X Server operating system, Apple hopes to hitch its wagon to one of the hottest trends in the computer industry, the open source movement that's produced success stories such as the Linux operating system and the Apache Web server. Here's the lowdown on what Apple's up to and what this whole open source deal is about.

In a nutshell, Apple has made available the source code for OS X Server's core operating system, a package of code nicknamed

"Darwin," comprised of a modified Mach kernel and a Berkeley Software Distribution Unix environment. Although Darwin doesn't include Apple crown jewels such as the Yellow Box, QuickTime, WebObjects, and the Mac interface, its contents are sufficient to construct a working Unix-style operating system. It also includes some hitherto proprietary features such as AppleTalk networking, Mac OS Extended Format, and the NetInfo configuration database.

While developers could simply visit Apple's <http://www.apple.com/publicsource> Web site, download the Darwin source code, and compile it into a freebie operating system, the company hopes they'll do much more than that. Under the terms of Apple's public source license, developers may copy and redistribute the code, make changes, add features, combine it with their own software, and even port it to other hardware platforms—provided they notify Apple of their modifications (see "Anatomy of a Public License" at left for more details on the terms). In return, Apple hopes to reap the benefits of open source development enumerated in this issue's Mac OS X Server feature.

This freedom qualifies the Darwin release as an open source offering. According to the Open Source Institute's definition, source code must accompany open source software so that the recipient may make changes and improvements, and the software maker must permit distribution of any modified versions. Up until last year, advocates of this practice more commonly used the term "free soft-

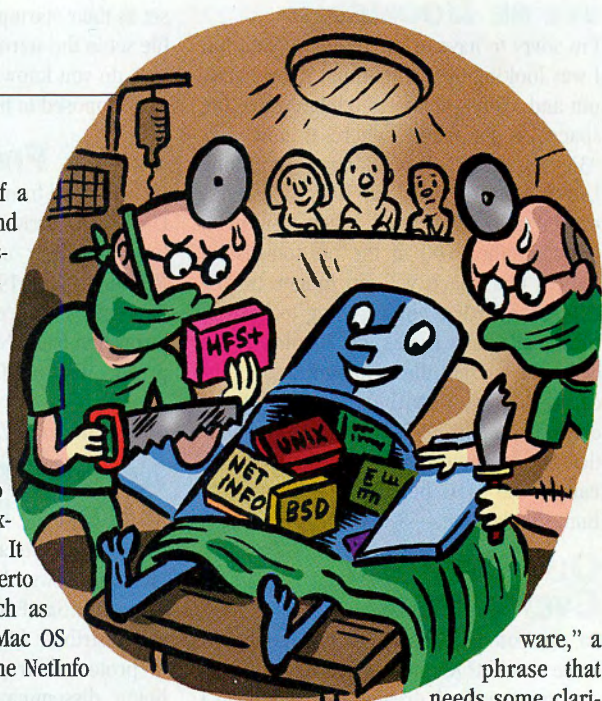


Illustration by Lloyd Dangle

ANATOMY OF A PUBLIC LICENSE

What can and can't you do with Apple's Darwin source code release? The full details lie in the Apple Public Source License at <http://www.apple.com/publicsource/apsl.html>, but here are some of the highlights.

You may use, copy, modify, and redistribute the Darwin source code for internal research and development. If you want to use or distribute your modified code for other purposes, you must make your modifications available in source code form and notify Apple of their availability.

Apple's own modifications to the Darwin code are not necessarily subject to the license, and thus it does not have an obligation to release them publicly.

In the event that part of the Darwin source code becomes subject to a patent dispute, Apple reserves the option of withdrawing your right to use the affected code. If you sue Apple over a patent dispute, it will instantly terminate your Darwin license.

ware," a phrase that needs some clarification; "free" refers not to the price, but to the liberties bestowed upon the user. As free software pioneer Richard Stallman has put it, it's free as in "free speech," not as in "free beer." (Though developers are permitted to charge for free software, they can't prohibit the purchaser from making copies and giving them away for free.)

In the last year or so, the open source movement has earned a lot of attention by emphasizing the benefits of collaborative development. By releasing their source code and soliciting outside contributions, the creators of Linux, Apache, and Netscape's Mozilla browser have been able to add features and fix flaws quickly.

But Apple's path to open source success may be a bit rockier, as free software fans have criticized the company's license for its provisions regarding patent disputes and license termination, and its requirement that developers notify Apple of modifications. The momentous alliance between the Macintosh and open source communities will likely require some careful cultivation.—MS

Beta Living Through Web Widgetry

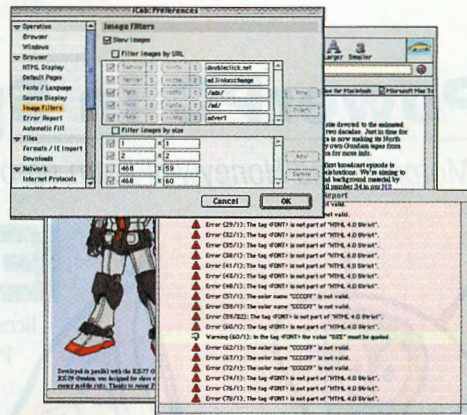
Sample the latest in prerelease surf accessories

The beta test has become something of an Internet tradition. Web tool vendors constantly crank out next-generation product previews, while hipster users rush to download the latest prerelease versions. In this spirit, here are some shiny new

betas for the adventurous Web surfer.

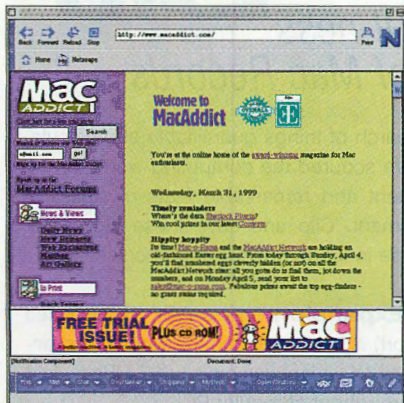
Opera buffs are still waiting for the fat lady to sing (see "Furrowed Browsers," Mar/99, p14), but **iCab** is ready to ride. This alternative Web browser hails from Germany, but you can download an English version from <http://www.icab.de>. In addition to having modest system requirements, iCab offers unique perks such as advanced searching options, image filters, and HTML syntax checking. The preview version is free, and the final release will be priced at 49 deutsche marks (\$27 at press time).

A more daring browsing option is to grab the latest build of **Mozilla**, the next generation of Netscape Communicator, from <http://www.mozilla.org>. Netscape's year-old open source development effort has thus far focused on overhauling the browser's innards rather than adding jazzy user features, but early versions are available for interested developers and reckless thrill-seekers. Similarly, the **WebTV Viewer** is



FUSSBUDGETS REJOICE! The Web browser iCab will block ads, skip large images, and even critique your HTML code.

meant to show Web authors how their pages will look to users of the Microsoft subsidiary's Web surfing appliance, but this faithful WebTV emulation and its remote control-driven interface are great diversions in their own right—see for yourself at <http://developer.webtv.net>.—MS



SNEAK A PEEK at the future of Netscape's Web browser by test-flying Mozilla.

Clip 'n' Save

Stop the Madness!

How to turn off those pesky "helpful" features

Software designers have your best interests in mind. That's why they give you a bevy of overbearing helpful features, from idiot-proof setup assistants to perky dialog boxes that tell you things you already know. If you're ready to dodge these helping hands and go it alone, here's how to disable some of the Mac OS's more obnoxious examples of user friendliness.—MS



■ SHUTDOWN WARNINGS

The only thing worse than crashing is restarting and getting heckled by a dialog box that chides you for not shutting down your computer properly. Lose the "I told you so" message by opening the General Controls control panel and unchecking the Shut Down Warning box.



■ TAKE OUT THE TRASH

Yes, you're sure you want to empty the Trash—enough already. To skip the concerned cross-examination, select the Trash icon on your desktop, choose Get Info from the File menu, and uncheck the Warn Before Emptying option.



■ LOCKED AND LOADED

Even after you've eliminated the trash-emptying warning, you'll still get a nagging dialog box when you try to delete a locked file. To skip this message and throw the locked items out with the rest of the garbage, hold down the Option key as you choose Empty Trash from the Finder's Special menu.



■ THE POINT OF COLLAPSE

Some people like collapsing windows by double-clicking their title bars, but you can turn off this option in Mac OS 8.x's Appearance control panel. You can still collapse windows into floating title bars by clicking the collapse box in the upper right corner.



■ DON'T TELL ME

As if to remind you it's installed, the Mac's speech recognition software is set to read the contents of dialog boxes aloud automatically after they've been on the screen for a few seconds. You can turn this off via the Talking Alerts section of the Speech control panel.



■ TOMORROW IS ANOTHER DAY

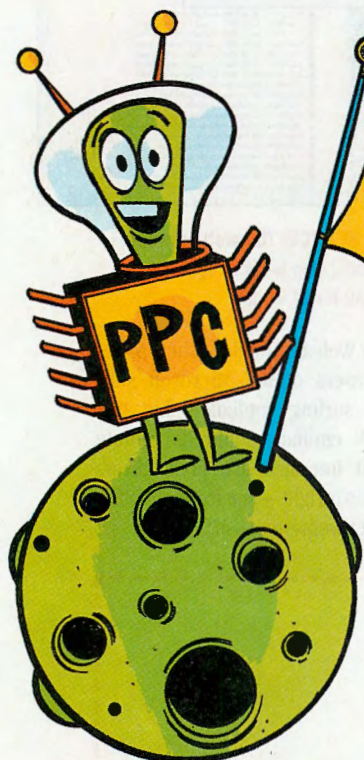
Mac OS 8.x's list views can display dates as today, yesterday, or tomorrow rather than strictly by month and day. You can turn this cutesy option off on a folder-by-folder basis by choosing View Options from the Finder's View menu and unchecking the Use Relative Date box.

get info

get info

PowerPC in Space!

Motorola and Honeywell team up on cosmic processor



Earlier this year, Honeywell Space Systems and Motorola quietly announced a joint licensing agreement that will send PowerPC technology into orbit—literally. The two companies are referring to the new chip expected to emerge from this agreement as the Space Processor Chip, or SpacePC for short. Based on Motorola's PowerPC 603e design, this space-faring processor will use Honeywell's Silicon On Insulator technology to protect it against cosmic rays and other orbital perils. The radiation-hardened SpacePC will provide satellites with 200 MIPS of processing power for demanding imaging and data transmission tasks, while its 2-watt power consumption will help it deal with the heat-dissipation problems that afflict spacecraft.—*DR*

Illustration by Mike Gorman



The GUI-ness Book of Mac Records

Ever in search of things quantifiable and calculable, we've scoured the computing world for the most excellent and remarkable feats of statistical accomplishment. Clip and save these high-water marks for use in future geekish arguments!—*MS*

Fastest Expansion: Intel's AGP (Accelerated Graphics Port) is the top dog in the world of expansion cards. Its 4X variant can pipe 1,067 MBps, eight times the throughput of regular PCI.

Fastest Networking: Gigabit ethernet, as its name suggests, clocks at up to 1,000 megabits per second (125 MBps)—ten times faster than 100BaseT.

Fastest Storage: Ultra2 SCSI, an option for the new Power Mac G3, maxes out at 80 MBps, edging out the 66-MBps Ultra ATA/66. Future versions of FireWire should top this figure.

Fastest Internet Connection: A T-3 line can handle 5.6 MBps. Even if your Mac has a fancy Internet hookup, such as a cable modem or DSL connection, the T-3 conduit further upstream still limits its speed.

Fastest Modem: Conventional phone lines deliver a puny 56 kbps, or roughly 0.007 MBps.

Loudest LaserWriter: The LaserWriter II kicks out almost 60 dB while printing. Ow, my ears!

Lightest PowerBook: Apple's original PowerBook Duo models weighed in at a slight 4.2 pounds, just over a quarter of the Mac Portable's hefty 15.8 pounds.

Tallest Tower: The 18.6-inch case used for the Quadra 900 makes it the second tallest Mac. The all-time biggest model is the 19.9-inch, 60-pound Power Mac G3 All-in-one.

Most Expensive Mac Available: A 400MHz Power Mac G3 with 1GB memory, triple 36GB hard disks, a Zip drive, DVD video, and gigabit Ethernet cards—yours for only \$15,349 at press time.

Skinniest G3: Motorola's 300MHz, 350MHz, and 400MHz PowerPC 750 processors are manufactured using a 0.22-micron process—just over five-millionths of a meter. These ultrathin circuit lines keep the G3 running cool.

All the news that's fit to revisit

Whatever became of SyQuest? When does the Intel trial start? From our loose-ends department, here are the resolutions to some past *Get Info* cliffhangers.—*MS*

■ "WHO'S SUING WHOM, AND WHY" (May/99, p15)

Just as the hearings were about to begin, Intel arranged an as-yet-mysterious settlement with the Federal Trade Commission, presumably to avoid the kind of public embarrassment that Microsoft has endured. Too bad for us industry gossips.

■ "COLORING BY NUMBERS" (Apr/99, p14)

As we predicted, by splitting the iMac into five flavors with five different stock-keeping unit numbers, Apple has taken it off PC Data's bestseller lists. So far, analysts reckon that grape and blueberry are the most popular colors.

■ "THE NEW STORAGE SUSPECTS" (Feb/99, p16)

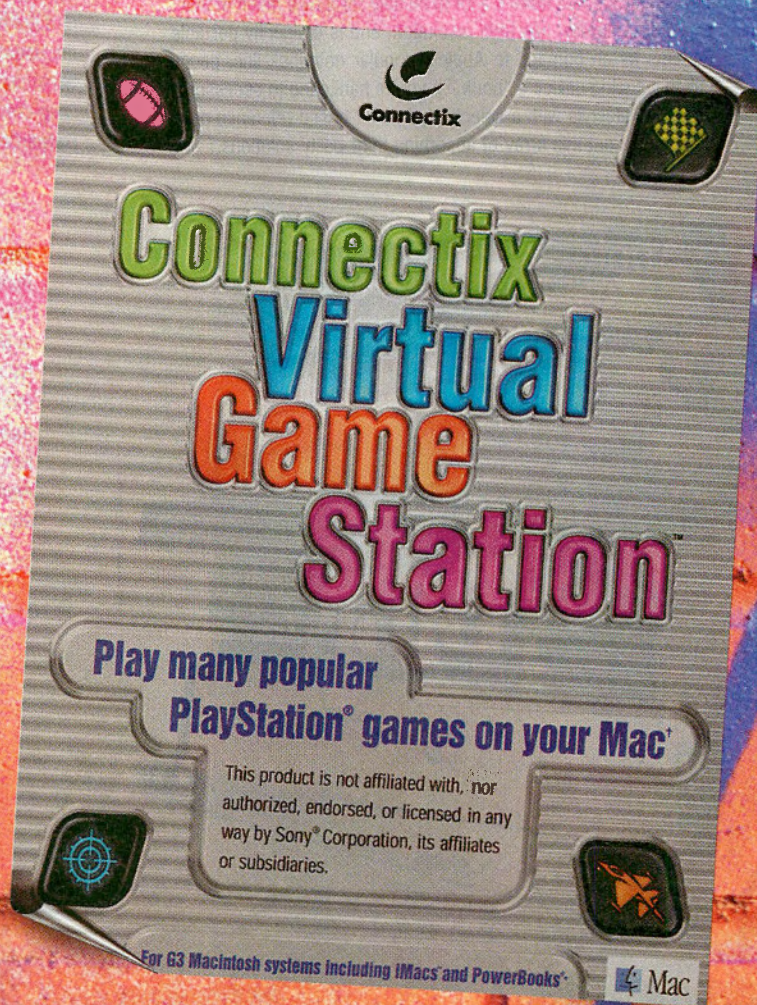
The bankrupt SyQuest Technology did eventually find a buyer for its left-over valuables. Longtime removable-storage rival Iomega will take home SyQuest's intellectual property, inventory, and assorted office furnishings for \$9.5 million in cash. In the meantime, SyQuest's remaining staff have resurrected the site <http://www.syquest.com> and resumed technical support.

■ STILL WAITING

As of this writing, streaming QuickTime is still a myth, and FireWire isn't quite cooking. But be patient—DVD finally arrived, didn't it?

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scrapbook

Ticklesome, tantalizing Macintosh tableaux in words and pictures.

The MacAddict Bookshelf

by Mark Simmons

The Internet puts a nearly infinite amount of information at your fingertips, but there's a lot to be said for a rival medium that's pleasant to handle, has high resolution, and is eminently portable. Perhaps as an homage to Apple's popular notebook line, people call this analog device a "book." If you're hankering to accessorize your Mac lifestyle with a selection of paper-based reference products, check out this array of absorbing third-party solutions.—MS

Photo by Aaron Lauer



Scandal in the Wind

Apple is probably the best of a recent crop of histories of the company, with lots of inside gossip and executive-suite foibles. The *Wall Street Journal*'s Jim Carlton draws on extensive interviews with key players to paint his scenarios of a doomed company, which anachronistically remains at death's door even in the updated paperback edition. Though Carlton is clueless on technology, the paperback corrects some glaring errors and now describes QuickTime as a "two-dimensional graphics technology" (rather than endowing it with three). HarperCollins, \$16

Out of the Bathroom

Perennial *MacAddict* contributor Owen W. Linzmayer has revamped his classic *Mac Bathroom Reader* into a trivia-packed history of Apple aimed at Mac enthusiasts. While the new *Apple Confidential* is fun, frisky, and full of juicy quotes and factoids, it has omitted some of its predecessor's more whimsical digressions—like the Dogcow history—in the interest of moving out of the computing section and into the business racks. The true Mac addict will need both versions.

Apple Confidential, No Starch Press, \$17.95

Mac Bathroom Reader, Sybex, \$12.99

The Book of Jobs

Those who suspect Apple's interim CEO of being a weirdo and a creep will find plenty of ammo in Michael S. Malone's *Infinite Loop*, which gleefully rehashes Jobs's previously documented misdeeds to paint him as a bath-dodging, Woz-stiffing, daughter-ditching cad. However, because Malone refuses to provide attribution for his anecdotes, it's hard to tell when he's drawing on mysterious anonymous sources and when he's just synthesizing content from previous books and press reports. Caveat lector, sez we.

Doubleday, \$27.50

Indispensable Tomes

You'll also need a couple of practical references around for those occasions when Balloon Help alone won't save your butt. Options abound, but we have a soft spot for the classics. Sharon Zardetto Aker's encyclopedic *Macintosh Bible*, now in its seventh edition, covers every aspect of Mac operation and also surveys the wide world of third-party products in its 1,000 pages. Ted Landau's *Sad Macs, Bombs, and Other Disasters*, last printed in 1997, is getting a little dated but still makes a good troubleshooting reference.

Macintosh Bible, Peachpit Press, \$34.99

Sad Macs, Bombs, and Other Disasters, Peachpit Press, \$29.95

Notes From the Underground

After poring through Carlton's and Malone's glum postmortems, you may be wondering how such a mess of a company ever managed to create such wonderful products. Gordon Thygeson's idiosyncratic retrospective *Apple T-Shirts* offers a clue, showcasing the irreverent outerwear that Apple employees have created over the years to express both their frustration and enthusiasm.

Pomo Publishing, \$39.95

The Path Not Taken

Paul Kunkel's handsome coffee-table book *AppleDesign* showcases the creative talent of Apple's rank-and-file employees. It's full of products shipped and stillborn, real and fanciful. Among our favorite evolutionary dead ends are the spooky RISC-based Jaguar, the alternative Pomona candidates, and all those poor doomed Newton variants. Gossip packs the text—including, for example, the half-serious plan to tailor John Sculley's jacket pocket to fit the bulky Newton MessagePad.

Graphis, \$44.95

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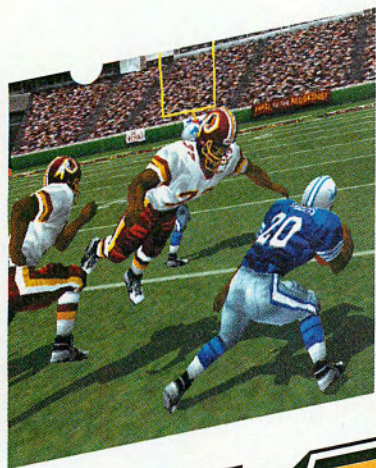
MANAGEMENT
SOFTWARE



CROSS
PLATFORM



got game



TWE GAM

*Which companies have
the moves to make the
big play?*

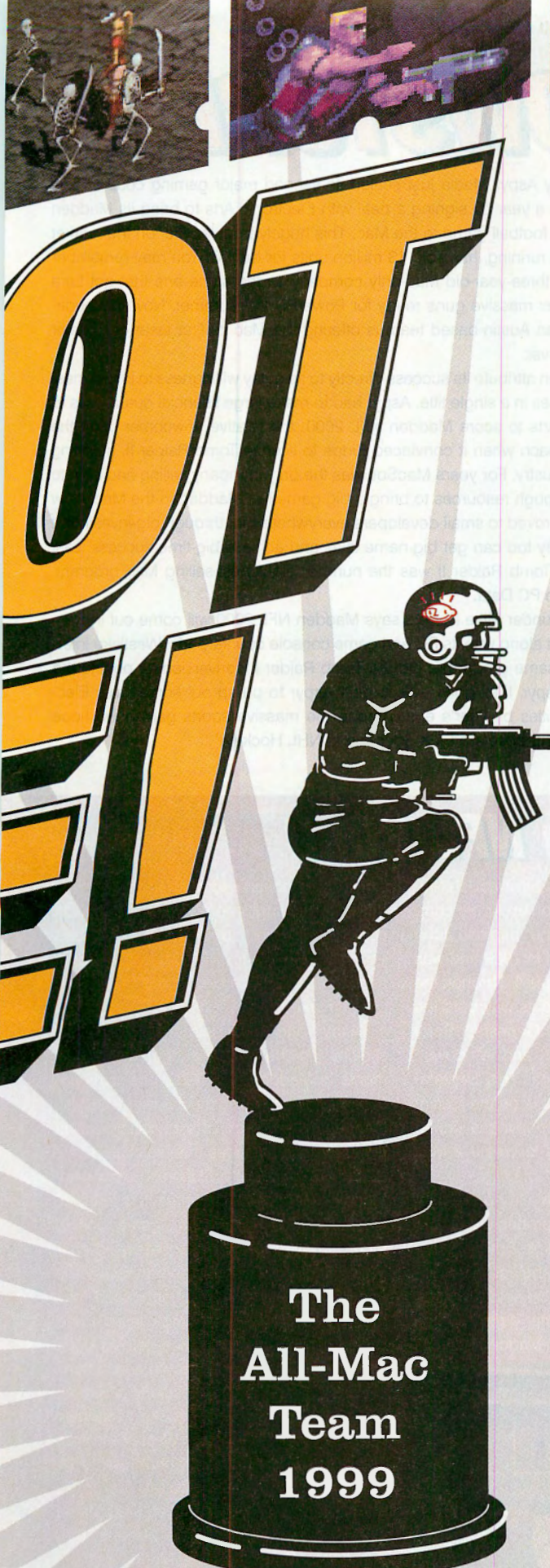
by Robert Capps

The smell of fresh-cut grass and roasting peanuts. The sound of cheers ringing through the air. The stirring in your stomach as you watch Barry Sanders rush those extra few yards for the all-time record. Well, this year, you're going to have to cut your own grass, roast your own peanuts, and cheer your heart out solo, because the best seat for the hottest games in town will be right in front of your Mac.

Madden NFL 2000—ever heard of it? It's only the best-selling sports game franchise of all time, and this fall it'll be the first big sports title to come to the Mac...well, ever, thanks to Electronic Arts and Aspyr Media. Be careful not to blow all your game time on Madden, though—you'll need to save some energy for the horrific blood-spurting action of Sierra's Half-Life, the endless dungeons of Blizzard's Diablo II, the thrilling intrigue of Mac-Soft's Rainbow Six, and the landscape-twisting action of Lucas Arts' Star Wars: Episode I Racer. Think you're ready?

Apple's intense focus on gaming is finally paying off. Thanks to the iMac, Apple's improved sales figures, and the company's revved-up support for developers, in the next few months the Mac will see some of its biggest gaming titles in years. After all, we sent Kathy Tafel over there to help Apple out—what did you expect?

As a tribute and celebration of the Mac's return to gaming glory, we've assembled a look at the six biggest, most influential Mac gaming companies today. We asked where they came from, what they think of Apple, and best of all, what they have planned for us next. Here they are—our Mac gaming all-star team. Root for them as they make next year the most breathless, brain-teasing, fingertip-blistering one ever!



**The
All-Mac
Team
1999**

THE SHOWSTOPPER

got game

THE SHOWSTOPPER

Madden NFL 2000

ASPYR MEDIA

Company: Aspyr Media

Contact: 888-212-7797, <http://www.aspyr.com>

Previous Releases: Mah Jong Parlour (1996), Bonkheads Deluxe (1997), Carmageddon (1998)

Current Releases: Tomb Raider II, Tomb Raider Gold

Future Releases: Madden NFL 2000 (September 1999)

Opinions on Apple

Hurray! Apple: Released the iMac, a consumer machine
Apple needs to: Sell more machines

THE 'ALL MAC TEAM 1999



Plucky Aspyr Media just sealed its second major gaming coup in less than a year by signing a deal with Electronic Arts to bring its Madden NFL football game to the Mac. This hugely popular title, on the market for 10 years running, has sold 13 million units for the PC. You may remember this upstart three-year-old Mac-only company as the same one that got Lara Croft and her massive guns ready for PowerPC last summer. Now this audacious 10-man Austin-based team is offering the Mac its first taste of a major sports title ever.

Aspyr can attribute its success directly to its gutsy willingness to invest massive resources in a single title. Aspyr had to make large financial guarantees to Electronic Arts to score Madden NFL 2000; the relative newcomer used the same approach when it convinced Eidos to license Tomb Raider II, stunning the Mac industry. For years MacSoft was the only company willing and able to pony up enough resources to bring a big game like Madden to the Mac. Now Aspyr has proved to small developers everywhere that through big-investment gambles they too can get big-name titles and achieve big-time success. Last December, Tomb Raider II was the number eight best-selling Mac program, according to PC Data.

Aspyr founder Mike Rogers says Madden NFL 2000 will come out in September, right along with its PC and game console counterparts. Westlake Interactive (the same group that did the Tomb Raider II conversion) is porting the game for Aspyr. If all goes well, expect Aspyr to pump out some other Electronic Arts titles by year's end. Among the massive sports games we hope Aspyr might choose are FIFA Soccer and NHL Hockey.

Madden NFL 2000

It's only taken 10 years, but Madden NFL has finally resurfaced on an Apple computer. That's right—the original John Madden Football came out in 1989 and was available on (gasp!) the Apple II. Through the years, the title also wormed its way onto the Commodore 64, Sega Genesis, Sony PlayStation, PC (both DOS and Windows), Super Nintendo, and Amiga. This September, the game will be available on the Macintosh for the very first time—Aspyr has signed a deal with Electronic Arts to create a Mac version.

Unless you're a vegetable living in seclusion in the Yukon, you've probably heard of John Madden. He's a multiple-E Emmy-toting, Superbowl-coaching, football-announcing legend, and a decade ago he sold his name to Electronic Arts to stamp onto a video game. Since then, the John Madden Football

series has dominated the sports gaming industry—selling more than 11 million copies, according to Electronic Arts. Last year, according to PC Data, the game accounted for 57 percent of the PC football game market.

Aspyr and Electronic Arts still remain sketchy on the specifics of new developments in Madden NFL 2000. The company completely overhauled the game in 1998 after Madden 98 fell short of expectations on all platforms and sold less than its rival, Sony's GameDay, on the PlayStation. The overhaul, Madden 99, brought the characters to full 3D polygonal glory, making the game look far more realistic than its old sprite-based characters did, and improved the artificial intelligence. Madden 99 also introduced new moves and wrap tackles, and offered a one-button mode in which novice gamers could activate the game's actions with one button.

Electronic Arts is still developing Madden NFL 2000 for all platforms. As scheduled, Aspyr's Mac version (which Westlake Interactive will port) should ship very close to the other versions. We can't wait to fire up the game and use a motion-captured Jamal Anderson to wiggle out the Falcons' Dirty Bird dance. Welcome back, Madden.

MADDEN NFL 2000 ISN'T FINISHED YET, but it should look even better than these screens from Madden 99.

THE PLAYMAKER

Back in 1996, MacSoft asked 3D Realms for the license on a little (OK, massive) PC game called Duke Nukem so that MacSoft could port the game over to the Mac. 3D Realms agreed. The resulting port of Duke Nukem became the best-selling Macintosh game in June 1997 in terms of units, according to PC Data, and it stayed at number one until MacSoft's second licensed port—Micro Prose's Civilization II—bumped it out in September 1997. Today, companies such as Aspyr Media and Logicware are following MacSoft's trail-blazing business plan to bring almost every major PC title to the Mac. Of course, nobody pursues the license strategy quite as vigorously as MacSoft, whose titles make up almost one-third of all Mac game sales.

But developing game licensing is not the end of MacSoft's tremendous impact on the Mac gaming community. Aside from the multitude of titles it has released for the Mac in the last few years, way back in 1998 MacSoft was the only company investing lots of money to promote the Mac as a gaming machine—even before Steve Jobs made games a priority at Apple. The company consistently ran multiple full-page ads in every Macintosh magazine (*MacAddict* included), and sponsored retail promotions across the country.

MacSoft's aggressive release schedule shows no sign of relenting—the company told us it hopes to release 15 to 20 titles in 1999. Among the ones it has already announced are Tom Clancy's *Rainbow Six* (currently on PC Data's top 20 best-selling PC titles) and *Civilization: Call to Power* (the latest installment in the outstanding *Civilization* series). The company says its next goal is to work more closely with major PC game developers to coordinate simultaneous Mac and PC releases in the future. If this comes true, MacSoft will no doubt remain ruler of Mac game sales for the rest of the millennium.



THE PLAYMAKER

Duke Nukem <

MACSOFT

Company: MacSoft
Contact: 800-229-2714, <http://www.wizworks.com/macsoft>
Previous Releases: Duke Nukem (1997), Civilization II (1997), Quake (1997)
Current Releases: Unreal, Dark Vengeance, Lode Runner II
Upcoming Releases: Falcon 4.0 (as you read this), Civilization: Call to Power (late 1999), Rainbow Six (August 1999), Age of Empires (as you read this)

Opinions on Apple
Hurray! Apple: Stopped the Mac's market share slide by selling more machines
Apple needs to: Grow its consumer and education base

THE ALL MAC TEAM 1999

THE VETERAN

It's easy to sit back and say LucasArts does well because it's attached to the movies of Lucasfilm—specifically the *Indiana Jones* and *Star Wars* trilogies. Yes, LucasArts has a connection to a great franchise, but the company has succeeded because it has made great games out of its franchise.

When George Lucas founded LucasArts in 1982, he didn't do it just to make money from *Star Wars* video games—he could have simply licensed the name for that. He wanted to build an interactive branch for his storytelling empire. It is Lucas's narrative idealism that makes LucasArts games good. They feature tightly constructed plots, well-developed characters, and engaging worlds, just like Lucasfilm movies.

In 1995, LucasArts was the second-biggest PC game maker (in terms of market share), with four titles in the top 20 best-selling PC games (*Dark Forces*, *Full Throttle*, *Rebel Assault II*, and *X-Wing Collectors CD-ROM*), and it was firmly committed to the Mac. But in 1996, LucasArts released *The Dig*, and the game failed to reach sales expectations on the Mac. Then, in 1997, LucasArts again saw less-than-great sales figures for its Mac release of *TIE Fighter*. As a result of these two failed games, the company stopped releasing titles for the Mac.

Now, for the first time in two years (and due in large part to the personal influence of Steve Jobs), LucasArts plans to bring a new game to the Mac. *Star Wars: Episode I Racer*—the company's first-ever racing game—is scheduled to hit the Mac market this spring just a few months after its PC counterpart. The company is still somewhat hesitant about completely recommitting to our platform, but it does say that if *Racer* does well we can look for LucasArts' other announced PC title, *Star Wars: Episode I The Phantom Menace*, to follow close behind. We predict both games will sell like gangbusters. If they do, you can bet LucasArts will be a major gaming force on both the PC and the Mac in coming years.



THE VETERAN

Pod Racer <

LUCAS ARTS

Company: LucasArts
Contact: 888-532-4263
Previous Releases: Indiana Jones and the Last Crusade (1989), *Dark Forces* (1995), *Full Throttle* (1995), *TIE Fighter* (1997)
Current Releases: Nothing released since August 1997
Future Releases: *Star Wars: Episode I Racer* (spring 1999)

Opinions on Apple
Hurray! Apple: Is committed to games
Apple needs to: Sell more machines

THE ALL MAC TEAM 1999

THE FRANCHISE PLAYERS

got game



Diablo II

THE FRANCHISE PLAYER

BLIZZARD

Company: Blizzard Entertainment

Contact: 800-953-7669, <http://www.blizzard.com>

Previous Releases: Warcraft (1994), Warcraft II (1995), Diablo (1997)

Current Releases: Starcraft

Future Releases: Diablo II

Opinions on Apple

Hurray! Apple: Is providing better development tools and easing up on licensing issues
Apple needs to: Price Macs more competitively with PCs



THE ALL MAC TEAM 1999

Since the Blizzard team first got together in 1991 as a company called Silicon and Synapse, other companies have acquired or merged with it no less than four times. After Davidson and Associates' 1994 acquisition, the company officially took on the name Blizzard. The latest owner, Havas Interactive (which also recently bought Sierra), is taking a hands-off approach and letting the Blizzard team do its thing. This is a wise move, considering that, according to PC Data, Blizzard has produced three number-one computer game titles in four years—Warcraft II, Diablo, and Starcraft.

Blizzard is, of course, best known for its part in propelling real-time strategy—games in which you develop a society, then take it into battle, all in real time—into a best-selling format. The company's Warcraft series, along with Westwood Studios' Command and Conquer, replaced slow-selling titles such as Westwood's Dune II, and by 1995 made real-time strategy a money machine—Warcraft II sold over 2 million copies on the PC. Starcraft, Blizzard's latest game to ship for the Mac, has again upped the ante for the genre by including three unique opponents—in this case different species—evenly matched for battle. On the PC platform, Starcraft has already sold over 1.5 million copies.

Even though Blizzard's titles come to the Mac at what seems a snail's pace (it took Starcraft a year to make it to the Mac), they all do eventually arrive, and the company continues to show that big companies can commit to the Mac and attain success. While Blizzard's commitment to quality Mac games may result in delays for Mac versions, it also sets a high standard for other developers looking to port their successful PC titles. The company's next title, Diablo II (the follow-up to the company's chart-topping, role-playing adventure game) is slated to ship for the PC in the third quarter of this year. Blizzard confirms that a Mac version is in the works—but don't expect to see it in stores until at least a few months after the PC version ships.



Half-Life

THE FRANCHISE PLAYER

SIERRA

Company: Sierra

Contact: 425-649-9800, <http://www.sierra.com>

Previous Releases: King's Quest Series (1984-98), Lords of the Realm Series (1994 to present), Caesar (1993)

Current Releases: Caesar II, Hoyle Casino

Future Releases: Half-Life (fall 1999)

Opinions on Apple

Hurray! Apple: Is generating lots of excitement and hype
Apple needs to: Maintain its energy and keep its target audience



THE ALL MAC TEAM 1999

Founded in 1979, Sierra is among the companies credited with founding the entire video game industry. Back in those early days when the Atari 2600 roamed the land, Sierra cranked out the first graphics-based adventure game ever conceived, Mystery House, originally developed just for the Apple II. Of course, when the PC took off in the early eighties, Sierra adopted that platform as well, and in 1984 the company gave birth to the first 3D animated adventure game (and the longest-running adventure game series of all time), King's Quest.

In the last several years, Sierra has been ignoring the Mac. The only titles the company brought over from its wildly successful PC business were easy-to-port arcade games such as pinball that were just a step above shareware. But Sierra is back. This fall the company will bring the best-selling title in company history, Half-Life, to the Mac.

Sierra affirmed for us that Half-Life's arrival on the Mac definitely indicates this major game company is back in the Mac game. Sierra now claims all of its titles will be cross-platform, and the company says simultaneous release dates are among Sierra's goals. We couldn't get the company to give us an official word on its next ultrahyped PC title, Homeland—but we'd say (in the words of the magic eight ball) that the outlook is good.



Diablo II

Blizzard Entertainment's *Diablo II* is coming to the Mac. Anyone who's ever lost a sleep-deprived weekend to the original *Diablo*—battling demons and the undead under a desecrated church—will either squeal with delight or run for cover, because *Diablo II* is a monster compared to its little brother. Currently slated as a four-CD set, it brims with all kinds of goodies—new characters, new quests, a new graphics engine, new towns, and new spells, to name a few. *Diablo II* will also feature 3Dfx support for an even more delicious gaming experience.

In *Diablo II*, players choose from one of five character classes—Amazon, Necromancer, Paladin, Sorceress, or Barbarian—each of which has its own unique strengths and abilities. By exploring towns, wilderness areas, and spooky dungeons, fighting monsters, and gathering treasures, players can increase their abilities until they've become like gods on Earth (or really powerful, anyway). The multiplayer gameplay (via Blizzard's massive gaming network, Battle.net)

should even surpass that of the original.

Blizzard expects *Diablo II* for the Mac to arrive a few months after it ships for the PC, but the company is understandably cagey about a final release date—after all, it caught a lot of grief for delays in the Mac versions of the original *Diablo* and *Starcraft*. Blizzard will already have embarked on development by the time you read this, though. It has yet to determine the price and hardware requirements, but who cares—it's going to rock harder than lentils!—*DR*



got game



DIABLO'S BACK, this time in a four-disc set with lots of new characters, monsters, all kinds of new locations.

Half-Life

That's right, Mac gamers—*Half-Life*, the PC megahit that has sold 750,000 copies, is coming our way. This game redefined first-person shooters on the PC, and you can bet it'll do the same on the Mac. As with any masterpiece, *Half-Life*'s appeal is difficult to reduce to its elements. To paint it broadly, three essential components of its revolutionary game design—dynamic artificial intelligence, stellar story integration, and abundant, complex character relationships—solidify its cool status.

To create an unforgettable, horrific cinematic experience, and to blend that with absorbing gameplay, the original developer, Valve Software, rewrote two-thirds of the Quake engine code, implementing the most sophisticated artificial intelligence we've ever seen in an action title (yes, even better than *Unreal's*). As theoretical physicist Gordon Freeman, you can never be sure how friends and foes will react. Human assassins and alien monsters attempt to kill you, security guards called Barney's try to kill aliens and help you, and scientists assist you or run away in terror. Furthermore, military grunts—

called in to contain the mayhem of a top-secret experiment gone awry—hunt you. The constant, unpredictable action of each chapter immerses you in a realism no other action-based shooter can equal.

In addition to its advanced artificial intelligence, *Half-Life* features a unique game design. Levels don't exist in the traditional sense—instead, you progress through fast-loading *chapters* (think minilevels), so you stay glued to unfolding events. The developers also omitted traditional cut scenes, in which all action stops and you watch a short animation. Instead, they incorporated plot-revealing events during gameplay, right before your character's eyes. Add diverse weapons and terrifying alien monsters you hear before they attack, and you've got an action game focusing on escape and survival rather than shootouts. *Half-Life* is one of the most satisfying single-player games released in years.—*JH*



IN HALF-LIFE YOU'RE PHYSICIST GORDON FREEMAN, trapped in the Black Mesa Federal Research Facility. Here you'll witness horrifying events such as genetic mutants eviscerating military grunts.

THE ALLSTAR

Back in the early nineties, when id captivated the gaming world with its landmark first-person shooter Doom, Mac gamers could only drool at the windows of computer superstores around the globe. Then Bungie came along, developed the Mac-only Marathon, and changed everything. Like the Mac itself, Marathon was more elegant, featured a richer context, and functioned better than its PC rival. The game also set the standard for multiplayer first-person shooter matches. Marathon was one of the first to offer specialized arenas for network games. Later, with Marathon 2, it was the first to add different multiplayer game formats, such as Capture the Flag and King of the Hill, to the standard run-around-and-shoot-each-other scenario.

In 1997, Bungie changed its focus from the highly successful and competitive first-person shooter genre to the blooming real-time action format. Titles like Blizzard's Warcraft and Westwood Studio's Command and Conquer popularized real-time action, and Bungie set out, again playing catch-up—not just cranking out a clone, but adding a whole new dimension to real-time strategy. The game Bungie came up with, Myth, was indeed unlike any other, and proved that Bungie can impact any game genre it touches. The company's love for action pervaded the game. Myth did away with the resource management aspect familiar to every other real-time strategy game—building towns, training soldiers—and created a strategy game focused entirely on sending troops to battle on a playing field. Myth, Bungie's first title designed simultaneously for Mac and Windows, has shipped over 350,000 copies to date. The landmark game earned a spot in almost every major gaming magazine's "best of" list (including ours), and put Bungie on *Inc.* magazine's 1998 list of the 500 fastest-growing private companies.

In Oni, Bungie's upcoming game, the company is looking to merge the third-person adventure game genre (à la Tomb Raider) with the hand-to-hand combat style of games such as Street Fighter and Tekken. Oni is also the first game Bungie has released from its new San Jose, California, development center, which opened in 1997. The team developing Oni is new to Bungie, which allowed the company to start work on the game while Myth II was still in production. For now Bungie is staying quiet on what the original programming team that brought us Myth and Marathon is up to, but we expect big announcements about its efforts in the near future.

THE ALLSTAR



Oni <

BUNGIE

Company: Bungie Software

Contact: 800-295-0060, <http://www.bungie.com>

Previous Releases: Marathon Trilogy (1994-97), Myth (1998)

Current Release: Myth II

Future Releases: Oni (early 2000)

Opinions on Apple

Hurray! Apple: Is promoting Mac gaming

Apple needs to: Promote Mac gaming more



THE ALL MAC TEAM
1999

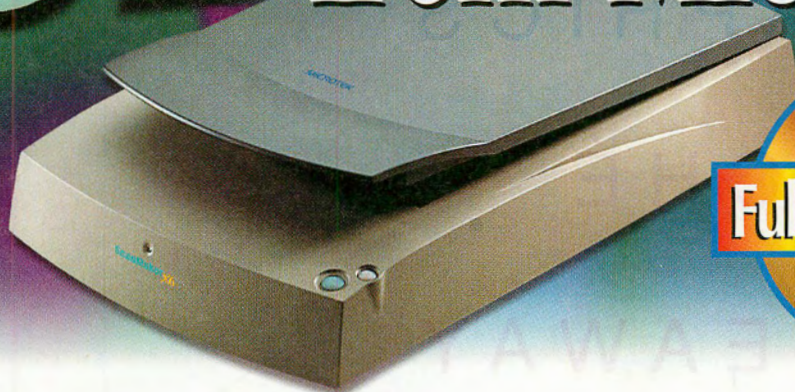
The Schedule

Better quit your job—this next gaming season has a brutal schedule. Here's a list of what games are on deck. (The companies making the games supplied these dates, and we take no responsibility if they are horribly, horribly off.)

COMPANY	GAME	GENRE	EXPECTED RELEASE DATE
Activision	Quake Arena	First-person shooter	Not announced
Activision	Quake II	First-person shooter	Not announced
Aspyr	Madden NFL 2000	Football	September 1999
Blizzard	Diablo II	Strategy	Not announced
Bungie	Oni	Third-person action-adventure	Early 2000
Fox Interactive	Alien Versus Predator	First-person shooter	Not announced
Gathering of Developers	Railroad Tycoon II	Strategy	April 1999
Gathering of Developers	Fly	Flight simulator	Now!
Logicware	Redneck Rampage	First-person shooter	April 1999
Logicware	Zork Grand Inquisitor	Adventure	Spring 1999
Logicware	Heretic II	First-person shooter	Summer 1999
Logicware	Battlezone	Arcade	Summer 1999
Logicware	Interstate 76	Racing	Fall 1999
LucasArts	Star Wars: Episode I Racer	Racing	Spring 1999
MacSoft	Age of Empires	Strategy	Any day
MacSoft	Falcon 4.0	Flight simulator	Any day
MacSoft	Civilization: Call to Power	Strategy	Late 1999
MacSoft	Rainbow Six	Action	August 1999
Sierra	Half-Life	First-person shooter	Fall 1999
Simon & Schuster	Deer Avenger II	Hunting	Summer 1999
Simon & Schuster	Mob Rule	Simulation	October 1999
Simon & Schuster	Star Trek Deep Space Nine: The Fallen	First-person shooter	October 1999

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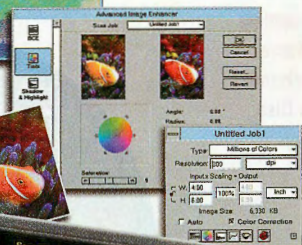
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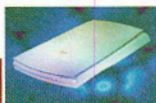
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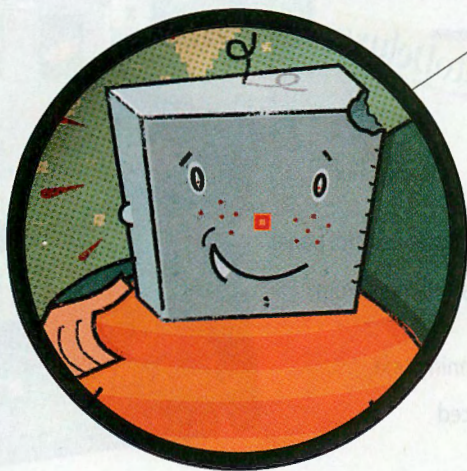
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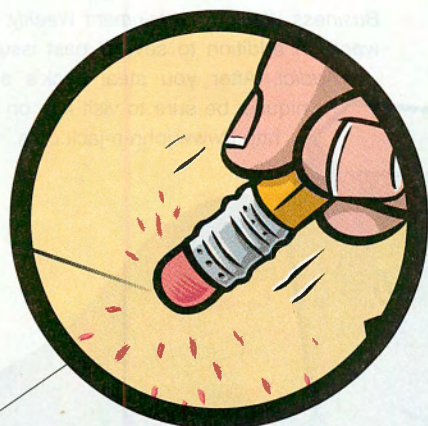
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BY ROBERT CAPPS



All professional illustrators are guilty of using clichés—their own. These self-styled tricks keep the illustrator housed, fed, well dressed, smelling fresh, and surrounded by attractive members of the opposite sex. They're his meal ticket, his stock in trade, his repertoire, his bread and butter—his *bag*, if you will. And we're not talking mere drop shadows, bevels, color schemes, program preferences, or refocused aggression. The best clichés are known only to the artist, who spent years—decades, even—developing them. Fortunately for us, most artists don't keep these valuable trade secrets under wraps.

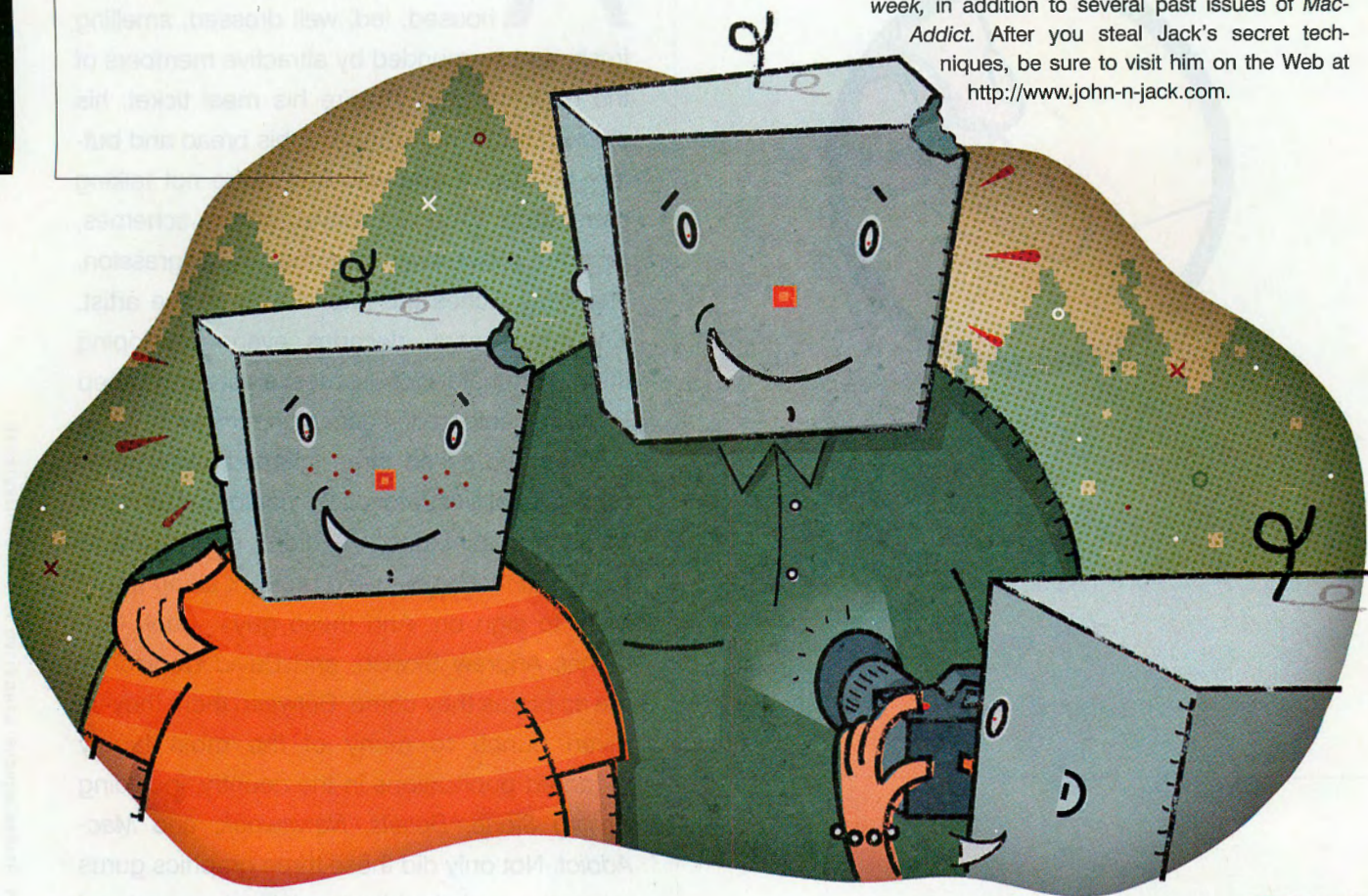
When we asked three talented, well-known professional illustrators if we could publish their personal techniques, we didn't even need to break out the tequila we'd brought along to get them to sign on. And these guys—Jack Gallagher, Andrew Skwish, and David Coulson—are as pro as they come. Between them they've given punch to many of the most highly regarded publications in the country, including *Rolling Stone*, *Details*, *Newsweek*, and *MacAddict*. Not only did these three graphics gurus surrender their highly specialized nuggets of Mac-based artistic genius, they even handed us screen shots with complete instructions!

To celebrate this wholesale giveaway, we asked each artist to illustrate a different cliché concept and then tell us how he did it. Now we're passing their tried-and-true, dyed-in-the-wool, owned-and-operated artistic techniques on to you. Keep in mind that these professional tricks and tips require professional software such as Adobe Photoshop, Adobe Streamline, and Macromedia FreeHand. For those of you unfamiliar with these particular programs, you can find tryouts of them on The Disc. Seasoned graphics veterans, though, probably already own an arsenal of such applications, so fire up your favorite one and play along.

JACK GALLAGHER

A CHIP OFF THE OLD BLOCK

Jack Gallagher describes his illustration style as a cross between comic-book cartoonism and old (read *poorly printed*) poster art. His ultraswank images have glossed the pages of *Business Week*, *Entertainment Weekly*, and *Newsweek*, in addition to several past issues of *MacAddict*. After you steal Jack's secret techniques, be sure to visit him on the Web at <http://www.john-n-jack.com>.



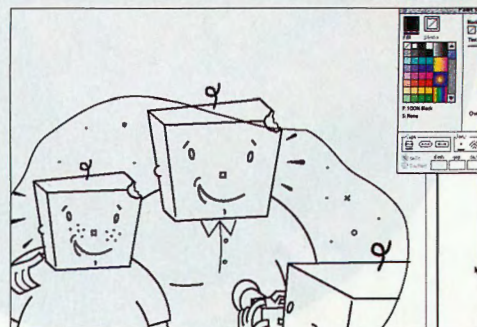
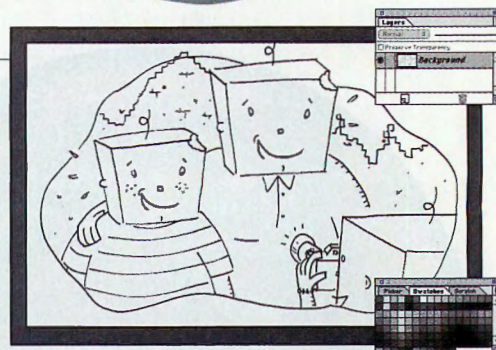
TECHNIQUE

1 MORE CHIPS THAN PONCH AND JOHN

Part of Jack Gallagher's signature style is the degraded quality of the lines composing the main images. Take a close look at the black that outlines the block-heads and you will notice tiny random artifacts—chunks missing from lines—throughout the drawing.

To achieve this look, sketch a drawing on a piece of paper and scan it into Photoshop. After making the scan, choose Image Size from the Image menu and blow up the resolution to 300 dpi. Save the file in EPS format and quit Photoshop.

Next open Illustrator and import the EPS file. Put the scanned sketch on its own layer to use as a template. Use various Illustrator tools, such as the Pen and the different shape tools, to trace the sketch until you have a reproduction of it in Illustrator. Output the Illustrator file to a laser printer, then take the printout and beat the crap out of it. One of Jack's favorite methods of abusing printouts is to shrink the image down with a photocopier and then blow it back up using the copier's enlarge feature. Several such attacks should chisel the line art satisfactorily. For a similar roughed-up effect, stick clear tape over the printout, then yank the tape up. Small chunks of the ink will come up with the tape, damaging the lines. After wearing and tearing the printout, rescan it into Photoshop at 300-dpi resolution.



DRAW AN ILLUSTRATION ON PAPER, scan it into Photoshop (above), and after a round of abuse bring it into Illustrator (below).

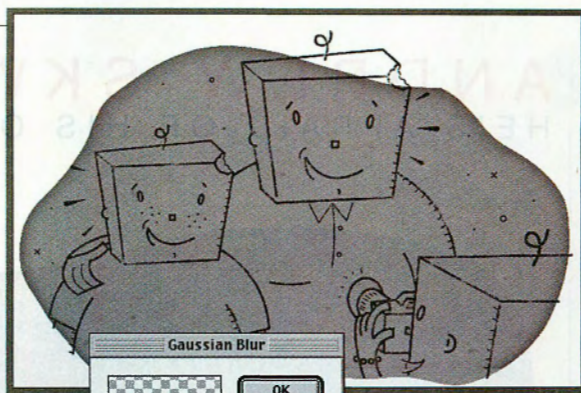
TECHNIQUE

2 IT'S GOOD FOR BREAK DANCING, TOO

Looking at any of Jack Gallagher's spot art, you'll notice that it has an indecipherable underlying texture. The secret is cardboard. Here is what you need to do to achieve this look.

Scan a piece of cardboard. Copy and paste the scan to a new layer in your 300-dpi Photoshop image. Select the layer with the line art and choose Multiply from the Layers palette. Putting a layer in Multiply mode simulates overprinting—dark colors appear on top of all other layers, and light colors disappear behind any other layers in the image. The line art appears on top of the cardboard.

To create an amorphous shape in the background of the image, as Jack has done here, you can use another unique Gallagher trick. Open the Illustrator drawing you made in Technique 1 and delete everything except the outline of the shape. Save this outline as an EPS file and open it in Photoshop, then paste the outline to a new layer in the main image. Select the layer and invert the selection by choosing Invert from Photoshop's Select menu. Then deselect the middle area and fill the outer area with white using the Paint Bucket tool. The cardboard now shows through only within the background shape. To make the dark gradient around the inner edge of the shape, duplicate the layer with the background shape outline (choose Duplicate Layer from the Layer menu) and blur the duplicated layer using the Gaussian Blur filter (choose Gaussian Blur from the Blur submenu of the Filter menu).



BLOCK OUT THE OUTER EDGE WITH WHITE and blur the inner line. This screen shows the art midblur.

TECHNIQUE

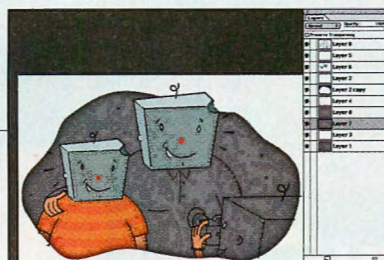
3 A HORSE OF A DIFFERENT...HUE?

Most artists looking to colorize a Photoshop image would use a combination of Paint Bucket fills and the Airbrush tool. Not Jack, though. He prefers the Hue/Saturation control (located under the Adjust submenu of the Image menu). Try it—you just might like it.

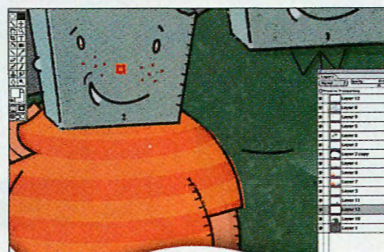
To start colorizing, use the Lasso tool to select the shape of an element in the drawing (say, one of the blockheads' heads) on the cardboard layer. Copy and paste this selected area to a new layer. Open the Hue/Saturation dialog box and check the Colorize option. Tweak the Hue, Saturation, and Lightness settings to add color to the selected area's layer. To achieve the slightly washed-out colors, keep the Saturation level fairly low.

Repeat this process for all the elements in the image. You can add shadows and highlights by selecting a desired area and lightening or darkening it with the Curves control (located under the Adjust submenu of the Image menu).

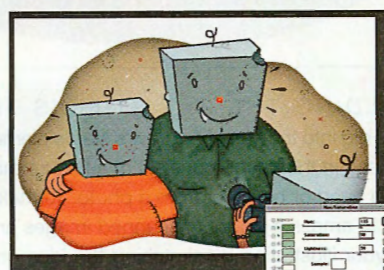
You also need to add color to the various speckles, lines, and stars sprinkled around the background. Start by going to the line-art layer and using the Lasso tool to select the image you are colorizing. Open the Hue/Saturation dialog box and adjust each of the sliders until the dot, line, circle, or star reaches the brightness and color you desire.



COLORIZE A PHOTOSHOP image one area at a time.



USE THE CURVES FUNCTION in Photoshop to add shadows and highlights.



COLORIZE BACKGROUND ARTIFACTS INDIVIDUALLY with the Hue/Saturation control.

TECHNIQUE

4 THOSE DOTS AIN'T FROM THE MAGAZINE SPINE

Jack Gallagher shared one last trick with us: his clever and oft-used method of adding halftone dots to an image. Look in the background of this image, for example, and you'll see a composition of small green dots. To create these dots, you need Photoshop's bitmap conversion capability.

Start by opening a new file that's roughly the same size as your illustration. Fill the blank file with a medium gray and change it to gray scale by choosing Grayscale from the Mode submenu (under Image). Then convert it to bitmapped mode by choosing Bitmap from the Mode submenu. In the bitmap conversion options, choose Halftone Screen, click OK, then set the frequency to about 15. You will end up with a file of small dots. Copy and paste these dots to a new layer in the main illustration file. Make the new layer a Multiply layer and place it near the bottom in the layer order. To finish the job, use the Hue/Saturation control on this layer to change the color of the dots.



YOU CAN MAKE THOSE COOL DOTS in the background from a separate bitmap.

illustrate

ANDREW SKWISH

HE'S AFRAID OF HIS OWN SHADOW

The most striking qualities of Skwish's illustrations, which have an ominous yet entertaining style, are his bizarre photo-made textures and insane use of black gradient lines. Find his work in the *New York Times*, *Rolling Stone*, and at <http://www.skwish.com>.



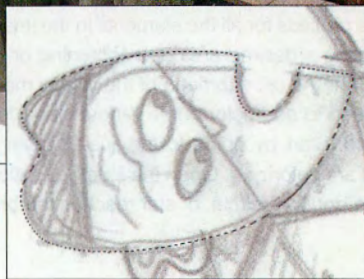
TECHNIQUE

1 HOLDING THE CAT STILL IS THE HARD PART

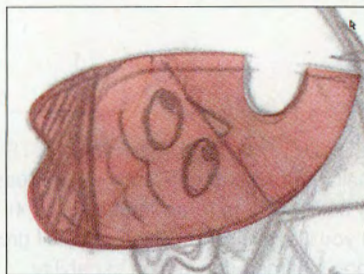
Let's dig into the first of Andrew's staple elements—textures. Almost every surface you see in the image consists of a texture that's scanned either directly (such as a scanned head or hand) or from a photo. To make such intricate use of textures, you need first to amass a library of scanned images and then do the following steps.

Start your illustration by sketching the idea on paper and scanning it into Photoshop. In Photoshop, select a piece of the sketch by tracing it with the Pen tool and turning the resulting path into a selection. In the example shown here, you're tracing the head of the guy who is afraid of his own shadow.

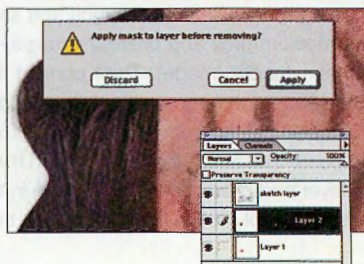
To create the face, Skwish scanned in the palm of his own hand (for skin texture) and his head (for hair). You can do the same, then select and copy an area of your scanned hand that's larger than the face in the illustration. Return to the main Photoshop image, where a selection should still exist around the head of the character. From the Edit menu, select Paste Into. This pastes the selection of the hand into the selection around the face on a new layer—the palm of your hand now makes up the texture of the man's face. Repeat the process with your hair scan to add to the man's scalp. When you choose the Paste Into command, Photoshop automatically places a mask on the target layer. You need to get rid of the mask to solidify the shape of the hair and face. To do this, just drag the Mask icon from the new layer on the Layers palette to the trash can icon located on the same palette. Repeat this process for every element in the illustration, calling upon your library of textures and scanned photos.



FIRST SELECT the Picasso-like form with the Pen tool in Photoshop.



THE TEXTURE IS A SCAN of the artist's own hand.



DITCHING THE MASK INFO locks the texture into place.

TECHNIQUE

2 HE SLICES, HE DICES... HE COULD CUT A GARBAGE CAN WITH IT

Skwish cloaks his illustrations in shadowy gradients that slice through at random points. Notice how this shadow technique also pops images in the foreground out from midground images. Skwish creates these shadows using Photoshop's Burn tool. In this example, we'll demonstrate how to make the shadow that runs across the fear-filled character's face and chest.

First create a rectangular path with Photoshop's Pen tool, making one of the sides run from the top of the face all the way down to the bottom edges of his coat. Turn the path into a selection on the new layer. Next select the Burn tool (it looks like a hand making an OK sign), and in the Options window choose Highlights from the pull-down menu and set the exposure to 40 percent. Then choose a large feathered brush from the Brushes menu. Drag the cursor along the line of the selection where you want the shadow to appear. On one side, the selection ends the burn in an abrupt line. On the other side, the feathered edge of the brush creates a gradient effect. And you've got your shadow slice!

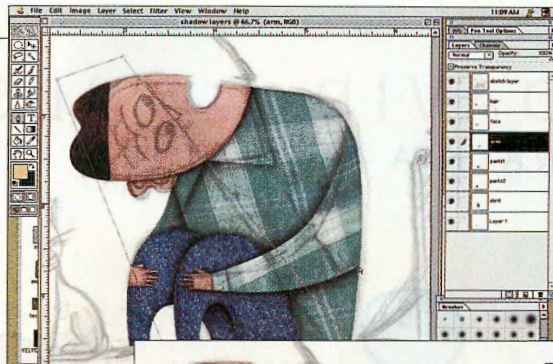
Skwish repeated this process for all the shadows you see throughout his illustration. In some cases, where a layer on top of the burn (for example, the sleeve of the man's shirt) overlaps it, you don't have to bother making a selection—the top layer makes the cut side for you. You should also vary the size of the brush to make the effect either more or less pronounced.

TECHNIQUE

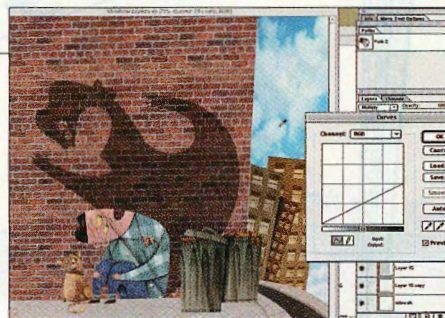
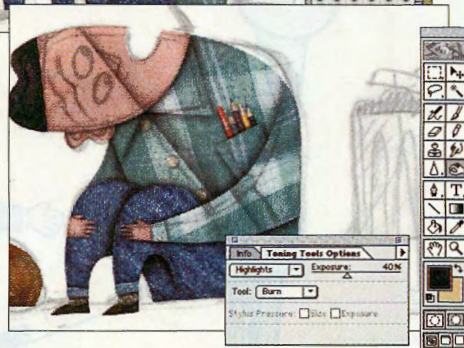
3 WAIT...THAT'S NOT HIS SHADOW

When Skwish showed us how he made the imposing shadow that menaces the frightened man, we thought it was so neat that we wanted to give it special mention. Looking at the shadow, an experienced artist may not immediately recognize why it's so cool. After all, a reduced-opacity black fill on a layer in front of the brick-wall layer would create a very similar shadow. But you want to be able to add the patented Burn tool cuts to this shadow to give it dimension. Look at the shadow's hand, for example: A layer with a lowered opacity would not allow you to do this.

Start by putting a black-filled shadow on a layer in front of the wall layer, but instead of making the shadow semitransparent by lowering the layer's opacity, make it a Multiply layer by selecting Multiply from the Layers menu. The darkness or lightness of the image on a Multiply layer determines how much the layers underneath it will show through. To make it more transparent, lower the layer's brightness in the Curves dialog box (located under the Adjust submenu of the Image menu). The shadow is now semitransparent, but you can still apply custom gradients to sections of it.

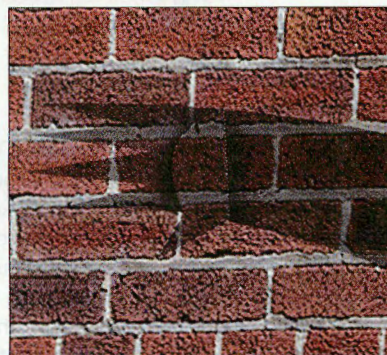


ANDREW SKWISH USES THE BURN TOOL in Photoshop to make those crazy shadows.



LOWERING THE BRIGHTNESS OF A BLACK IMAGE (in this case using the Curves dialog box) on a Multiply layer makes it semitransparent.

BY USING MULTIPLY LAYERS instead of reducing opacity to make the image semitransparent, you can darken certain areas to make them less transparent.



THE TEXTURE FETCHER

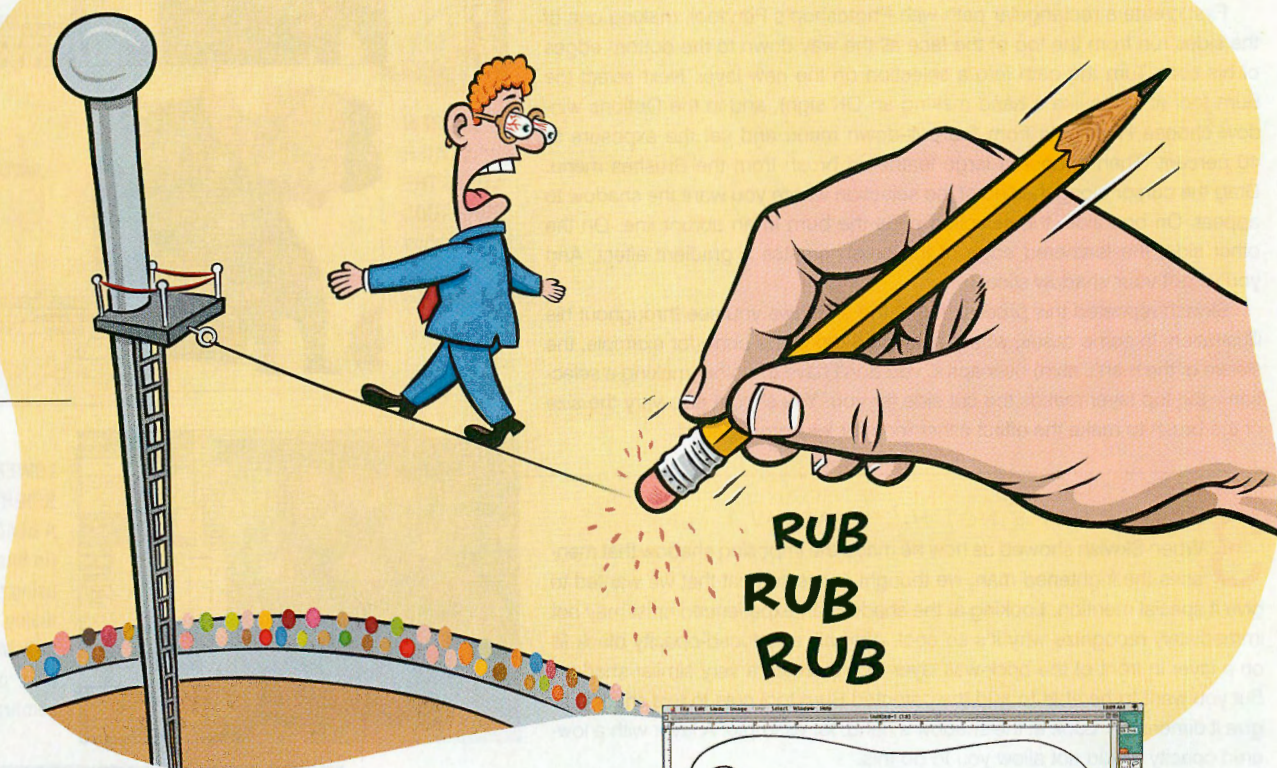
- 1 SKY—Skwish used an actual night sky but added a nice Gaussian blur.
- 2 TRASH CAN 1—Someone threw away a bunch of tinfoil.
- 3 CAT—The fur is from a cat, and the eyes are photos of a cat's eyes.
- 4 JEANS—That's right, the denim is actually denim.
- 5 TRASH CAN 2—This trash is really scanned cake frosting. Yum.
- 6 TRASH CAN 3—Dried paint from a paint dish. How artistic!
- 7 ROAD—This is actually a scan of a small chalkboard.

Andrew Skwish used a lot of scanned textures and photographs to compose his illustration. The scared man's hair is a scan of Skwish's own hair, and the face and hands contain scans of Skwish's palm. Here are some of the other textures you can spot in the image.

DAVID COULSON

WALK A THIN LINE

David Coulson's artistic style is the most traditionally cartoonlike of the bunch. He even describes himself as a cartoonist masquerading as an illustrator, and he achieves this look with clean lines, a sense of humor, and lots of color. You may have seen his work in *Sports Illustrated*, *Details*, and *Fortune*. You can find him on the Web at <http://www.davidcoulson.com>.



TECHNIQUE

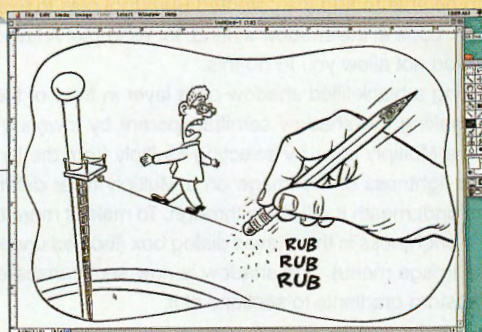
1 JUST LIKE A GRAPHICS TABLET

David Coulson's lines look hand-inked because they are...well, hand-inked. To get an illustration to look like his, you must start by sketching it out by hand, then inking it to watercolor paper with India ink and a fine-point watercolor brush. (The harder you push on the brush, the thicker the line will be.) Don't color the illustration on the watercolor paper—just outline it. Now comes the hard part: getting this organic outline into the computer and converted to the editable points that vector graphics provide. This is where the Adobe Streamline image converter comes in handy.

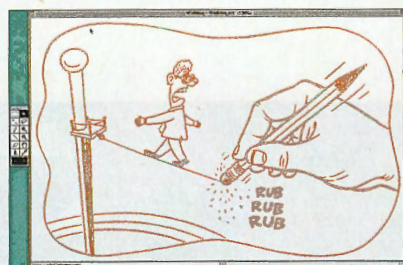
Scan the inked outline of your illustration into Photoshop, selecting the scanner's line-art option to make everything either pure black or pure white and setting the highest resolution available—in Coulson's example, 600 dpi. With the image open in Photoshop, use the program's various tools (such as the Eraser) to clean up artifacts and specks that you don't want in the image. Then save the image as a TIFF file so Streamline can read it.

Open the TIFF in Streamline to convert it to point-laden vector art. For settings, choose Streamline's Outline Black and White option. Streamline draws paths around the line art, creating the same kind of adjustable points you find in vector-based artwork created in Illustrator or FreeHand.

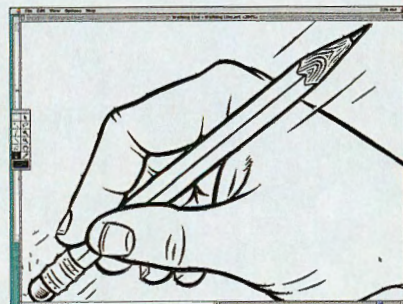
Once you've converted the image, smooth out some of the lines using Streamline's Delete Point tool. Save the vector-based image as an Illustrator file (which Macromedia FreeHand can easily convert) and quit Streamline. You can now open the image in FreeHand and fiddle with the points to your heart's content.



SCAN AN INK
DRAWING into
Photoshop...



...AND USE
ADOBE
STREAMLINE
to convert it
into paths.



DELETE
EXCESS
POINTS in
Streamline
to clean up
the image.

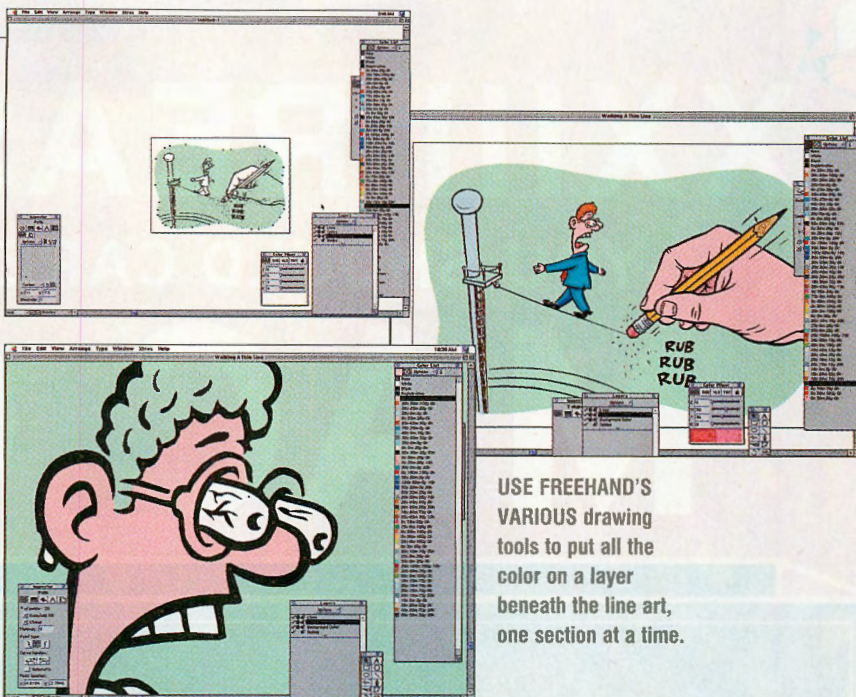
TECHNIQUE

2 IT'S LIKE BAKING A CAKE, ONLY WITH GRAPHICS APPLICATIONS

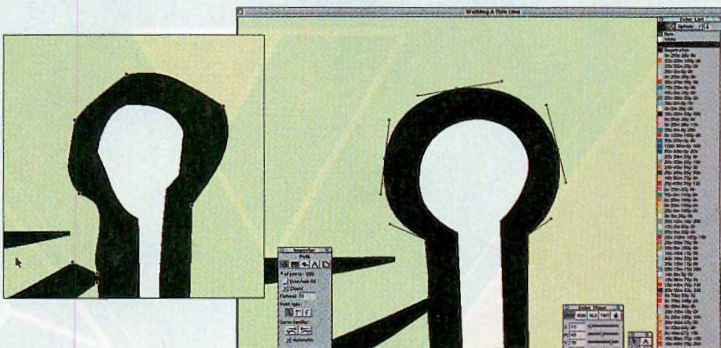
Coulson's slick method for creating those organic lines leaves you with one little problem: Most of the shapes in the illustration are not completely closed, so once you get the image open in FreeHand, you can't simply fill in the shapes with color. Instead, you must use some artistic ingenuity.

To start the process of adding color to your masterpiece, create a new layer in FreeHand to use as the color layer. Using the program's drawing tools, create colored shapes behind the line art. Even in places where the line art provides closed shapes that you can fill, copy the fill and paste it to the color layer behind the line art. You should also select a negative inset path to blend the color areas underneath the black lines. To do this, choose Inset Path from the Path Operations submenu under the Xtras menu.

Even though you're going for a hand-drawn look, you still need to smooth out some of the rougher edges in FreeHand, as some of the areas are far too rugged. From the Inspector palette, assign point types to areas you want to smooth over, then delete the unwanted points and check the Automatic box in the Path Inspector dialog box. This causes FreeHand to smooth the lines between points automatically.



USE FREEHAND'S VARIOUS drawing tools to put all the color on a layer beneath the line art, one section at a time.



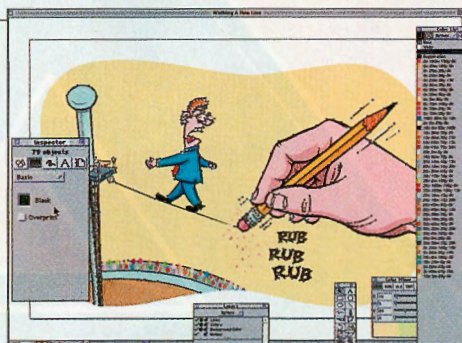
TO SMOOTH OUT CERTAIN AREAS, you change the type of points that outline them, then tell FreeHand to adjust the lines between those points automatically.

TECHNIQUE

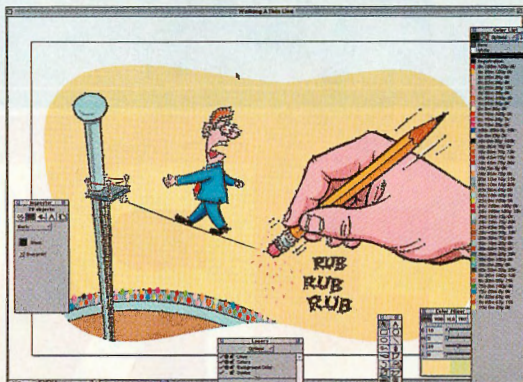
3 TRAPPED LIKE A...COLOR FROM A POSTSCRIPT OUTPUT DEVICE

You need to overprint all the black lines in the image so that it will properly trap (contain) the colors underneath. First select all the black in the image. Coulson currently uses an old Select filter that came with Adobe Illustrator 5.5. The most recent versions of FreeHand can use Illustrator filters, so Coulson just dragged his Select filter from Illustrator's plug-in folder into FreeHand's Xtras folder. If you're able to do the same, choose the Select filter from the Xtras menu to select all like colors. If you don't have access to this filter, you'll need to select all the black individually.

Once the black is selected, open the Stroke dialog box in the Inspector palette and click the Overprint option—this tells the printer to output the black (the selected color) over the colors beneath it. Normally, a printer stops printing the underlying layer where it touches the black. By overprinting the black, you ensure that your printout will not end up with small spaces between the black and the underlying color. You can view the areas you just selected to overprint by choosing Display Overprinting Objects from FreeHand's Redraw menu (in Preferences, under File); it makes all the areas you've set to overprint show up as a pattern of small white O's.



A FILTER HE BORROWED FROM ILLUSTRATOR 5.5 lets David Coulson quickly select all the black, which he then sets to overprint.



CHOOSING DISPLAY OVERPRINTING from FreeHand's Redraw menu puts small white O's in the areas that will overprint.

Robert Capps is now properly versed in professional illustration techniques, making the fact that he can't draw a lick all the more painful.

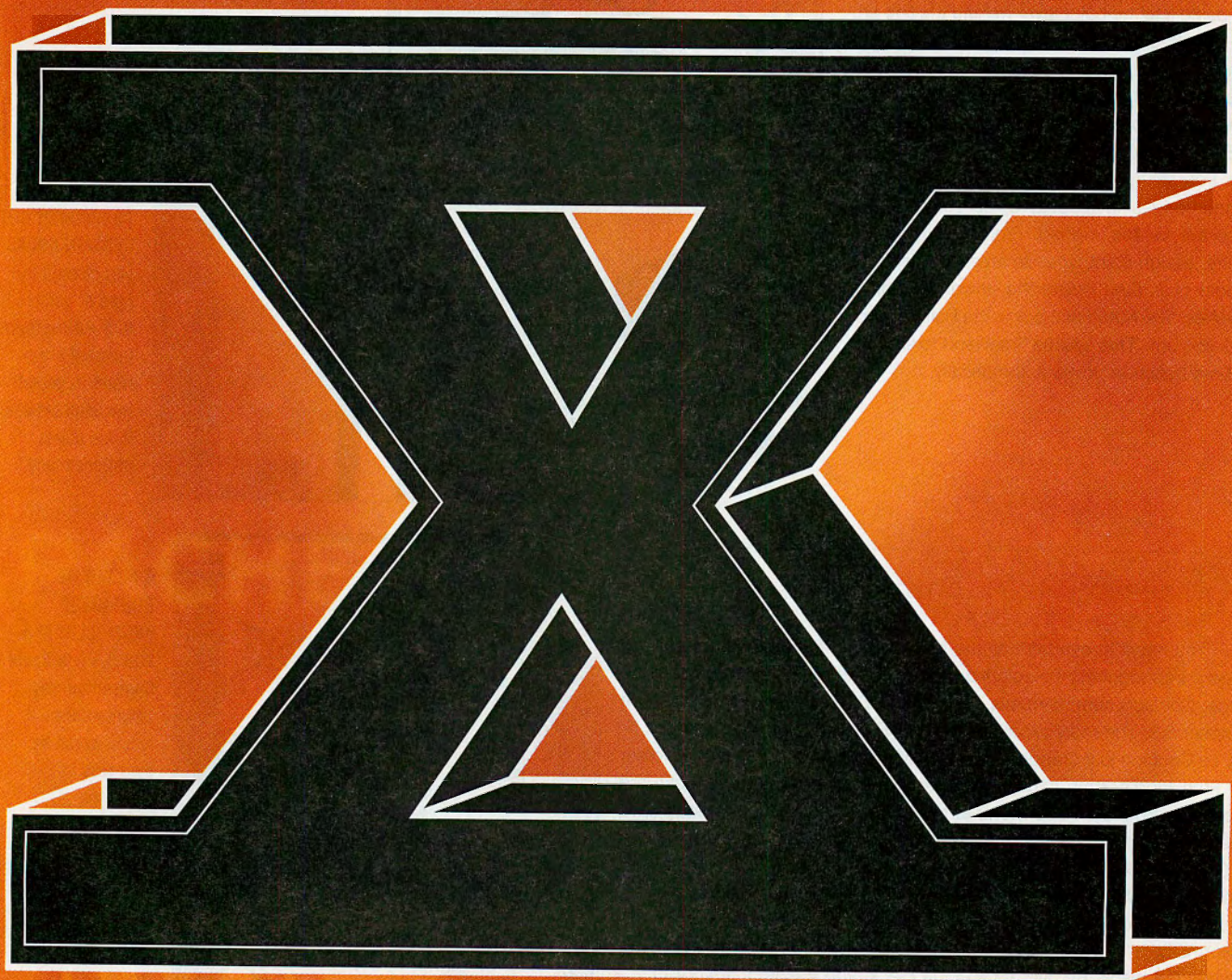


x server

XXIII REASONS

YOU SHOULD CARE ABOUT

MAC OS



SERVER

BY MARK SIMMONS

AS THE OLD CLICHÉ HAS IT, WE HAVE SOME GOOD NEWS AND SOME BAD NEWS. THE GOOD NEWS IS THAT MAC OS X IS HERE; THE BAD NEWS IS THAT ITS FIRST INCARNATION IS AS A SERVER OPERATING SYSTEM, TAILORED FOR WORKGROUP ADMINISTRATORS AND WEB SERVER MANAGERS. BUT FOR ANYONE WHO CARES ABOUT THE FUTURE EVOLUTION OF THE MAC OS, THERE ARE A FEW THINGS THAT YOU SHOULD KNOW ABOUT MAC OS X SERVER, EVEN IF IT'S NOT GOING TO BE KICKING MAC OS 8 OFF YOUR DESKTOP SYSTEM RIGHT AWAY.

BY RELEASING A SERVER OPERATING SYSTEM, APPLE MAKES ITS FIRST FORAY INTO A MARKET PREVIOUSLY DOMINATED BY MICROSOFT'S WINDOWS NT AND ASSORTED UNIX VARIANTS. MAC CUSTOMERS IN EDUCATION AND SMALL BUSINESSES, WHO FORMERLY MIGHT HAVE HAD TO TURN TO ALIEN PLATFORMS TO RUN HEAVILY TRAFFICKED WEB SITES AND FILE-SHARING SERVERS, NOW HAVE AN APPLE-BRANDED ALTERNATIVE.

FOR INDIVIDUAL USERS, OS X SERVER OFFERS A GLIMPSE OF THE FUTURE; AS THE FIRST INCARNATION OF APPLE'S NEXT-GENERATION OPERATING SYSTEM, IT FORESHADOWS WHAT YOU CAN EXPECT FROM THE UPCOMING GENERAL-PURPOSE MAC OS X. AND PERHAPS MOST IMPORTANT, THE ARRIVAL OF THIS NEW OPERATING SYSTEM PROVES THAT APPLE IS AT LONG LAST DELIVERING ON ITS AMBITIOUS PLANS FOR THE MACINTOSH PLATFORM.

V GREAT EXCUSES TO BUY APPLE STOCK

With the release of OS X Server, Apple has taken a major step toward realizing its grand plan for the Mac OS. When the general-purpose version of Mac OS X arrives—by the end of the year, last we heard—it'll likely sport a different interface and feature set. Nonetheless, Apple has laid the foundation for this future release, and the current server operating system brings good news about the Mac OS of tomorrow...and the Apple of today.

I THE PLAN IS WORKING, THE PRODUCTS ARE SHIPPING.

In its ongoing quest to create a worthy successor to the beloved but somewhat antiquated Mac OS, Apple has been through a number of ill-fated operating system strategies—Pink, Copland, and the Rhapsody plan that would have made NeXT Software's NextStep operating system the heir apparent to the Mac legacy. Then last spring interim CEO Steve Jobs announced a new twist to the Rhapsody plan—one that would provide the essential

advantages of the NextStep operating system without requiring developers to rewrite their programs from scratch or forcing users to relearn their Mac habits. Now, by delivering on the first phase of the Mac OS X road map, Apple has reached a milestone it never managed to attain with previous operating system projects: shipping a complete, working OS.

II APPLE FINALLY HAS AN ANSWER TO WINDOWS NT.

Microsoft's consumer operating system, Windows 98, is in many respects still striving to catch up to the Mac OS. But when it comes to its high-end OS, Microsoft has a substantial lead. Windows NT, like Unix and its variants, delivers such features as preemptive multitasking (smoother and more efficient than the Mac's cooperative model), memory protection (which keeps applications from crashing each other), and multiprocessor support. As a result, NT and other modern operating systems crash less, offer higher performance,

and can host demanding server applications. With the advent of OS X Server, Apple at last has a response to these rival systems.

III THE NEW OS FOUNDATION IS READY TO ROCK.

The reason that Mac OS X Server can hang with these heavy-duty operating systems is that it's built on a robust, thoroughly modern foundation. The Mach kernel provides the essential benefits of preemptive multitasking, memory protection, and high-performance virtual memory. Meanwhile, the operating system also supports Mac standards such as Mac OS Standard and Mac OS Extended volume formats—HFS and HFS+, for retrogrades—and AppleTalk networking. It's this core operating system that will form the basis of the general-purpose Mac OS X.

IV DEVELOPERS HAVE MORE OPTIONS.

Mac OS X Server provides developers with three ways to write software. First, it has a Berkeley Software Distribution (BSD) Unix environment, albeit one that lacks support for graphical interfaces. Second, OS X Server offers full support for Sun's Java programming language. And third, there's the "Yellow Box," the high-tech programming foundation inherited from OS X Server's NextStep ancestor; Yellow Box programs can be written in either Java or Objective C, the oddball C language variant favored by NextStep's creators. The last missing piece, to come in the general release of Mac OS X, is Carbon—a revised version of the Mac OS toolkit that lets developers tap the power of the new OS foundation without rewriting their programs for Unix, Java, or the Yellow Box. Thus, Mac OS X will be all things to all developers.

V DARWIN WILL MAKE THE MAC STRONGER.

When it unveiled OS X Server, Apple also released some core components of the operating system—a package called Darwin—as open source (see page 14 of *Get Info* for details). Apple's embrace of the open source movement is great for grabbing headlines, putting it in the company of success stories such as Linux and Apache. But exposing the source code of OS X Server's innards also lets the company tap into a huge volunteer brain trust, allowing enterprising outsiders to modify and improve the core operating system while Apple picks and chooses from the best of these enhancements. Developers can even modify the code in radical new ways, porting it to other platforms, adding novel capabilities, and otherwise subjecting Darwin to the evolutionary forces of mutation and natural selection.

VI REASONS TO WANT IT

If you're a workgroup manager, a Web server administrator, or one of those reckless early adopters, you'll find that Mac OS X Server delivers a lot of bang for your 500 bucks. And if you know someone who falls into these categories, or you want to score points with an NT- or Unix-infatuated system administrator, here are the features that'll get them drooling.

I POWERFUL WEB SERVING IS SIMPLE.

OS X Server includes a copy of Apache 1.3.4, the open source World Wide Web server estimated to power more than half the world's Web sites. Not only is this popular Web server ready for heavy traffic—it's easy to set up. Just check a box in OS X Server's setup assistant, and presto, you're running an Apache server. The OS X Server package also includes a copy of Apple's acclaimed WebObjects, with a 50-transactions-per-minute license sufficient for evaluation or deployment in small workgroups. This software, previously available only for Windows NT and Unix, connects databases to Web sites to create sophisticated online applications.

II FILE SHARING IS BIGGER AND BETTER.

The Apple file services that OS X Server provides are a definitive advance over previous AppleShare offerings. AppleShare IP 6 supports a maximum of 250 users over AppleTalk or 500 via TCP/IP, can open up to 346 unique files at a time, and allows up to 4,096 user accounts. OS X Server can handle up to 1,100 connected users via AppleTalk or TCP/IP, more than 4,000 unique open files, and 10,000 user accounts. Pretty good, huh? One caveat: You can only share

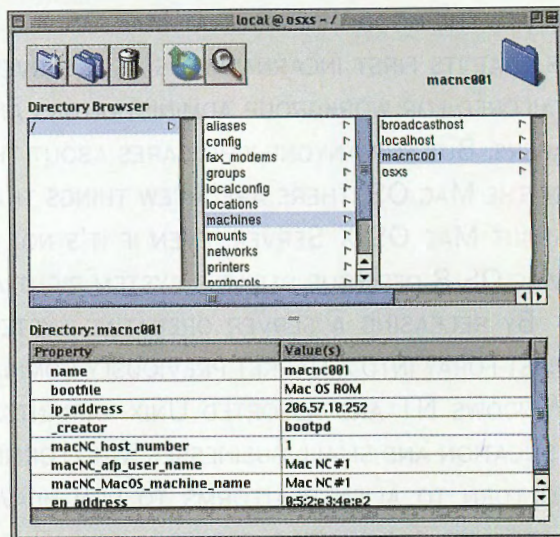
Mac OS Extended format volumes, not classic Mac OS Standard format ones.

III MANAGING MACS IS EASIER THAN EVER.

OS X Server includes a Macintosh Manager tool that, like the previous At Ease for Workgroups, lets you save user preferences on a central server and govern access to personal files, shared folders, and common applications. It then builds on this with an innovative NetBoot feature that lets supported Macs—namely iMacs and the new blue-and-white Power Mac G3s—load their system software from the server. The result? System maintenance becomes simple, with only a single system folder for the system administrator to worry about. (We'll discuss these features in more detail on the following pages.)

IV NETINFO ALLOWS REMOTE SYSTEM MANAGEMENT.

Another of OS X Server's unique features is the NetInfo distributed database. This database stores every detail of the host machine's configuration, from monitor settings to user accounts. OS X Server shares the database with other NetInfo servers on the network, allowing an administrator to log into any machine and change the settings of any other machine. For now, though, this applies only to systems running Mac OS X Server and the user accounts stored therein.



THE NETINFO DATABASE stores every detail of your machine's configuration, from its IP address to the user accounts it hosts.

V YOU GET A SNEAK PEEK AT STREAMING QUICKTIME.

The OS X Server package includes a pre-release version of the QuickTime streaming server, Apple's long-awaited and oft-demonstrated system for transmitting live QuickTime content over networks and Internet connections. Apple provides no phone support and precious little documentation, but at least you can start playing with this hot new technology.

VI MAC OS X SERVER IS PRETTY DARNED CHEAP.

Just as it gave the iMac a last-minute modem speed upgrade, Apple has adjusted Mac OS X Server, halving the price announced at January's Macworld Expo. The complete package now costs just \$499, with a \$249 price tag for education customers—and unlike Microsoft's server operating system, OS X Server comes with an unlimited user license.

BATTLE OF THE SERVERS

The arrival of OS X Server forces us to add a new buzzword to our vocabulary: "server operating system." In a nutshell, the term denotes an operating system with the speed and stability required to run demanding programs that multiple users access. A modern server operating system needs features like memory protection and preemptive multitasking, plus a bundle of essential services like file sharing, the ability to manage user preferences and access privileges for multiple client machines, and the obligatory Web server. A server OS may actually use the same underlying system software as its general-purpose kin, but it's this bundle of add-on services that makes the difference.

Apple's shipment of a server operating system also means the company is finally challenging Windows NT on its own turf. Here's how OS X Server compares to Windows NT Server. While it isn't a slam dunk for Apple, it's a strong showing for a first-generation product.

FEATURE

Requirements

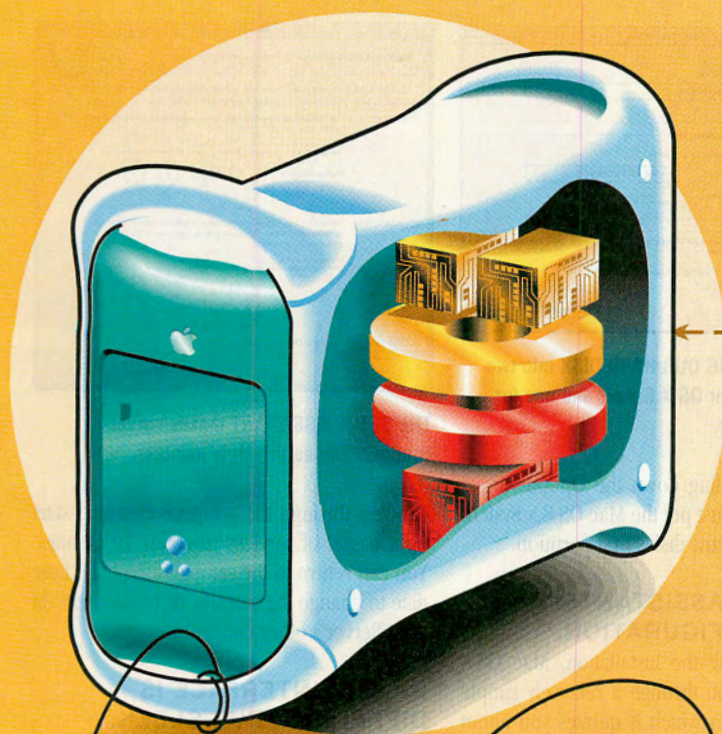
Core OS

Platforms supported

Bundled services

Price

AT A GLANCE



Price: \$499 (\$249 educational)

Also available is a preconfigured system, the Macintosh Server G3 with Mac OS X Server, priced at \$4,999 and featuring...

- 400MHz PowerPC G3 with 1MB of cache 256MB RAM
- Two 9GB Ultra2 SCSI hard disks
- Four-port 10/100BaseT Ethernet card

What you'll need:

- Power Mac G3 or Macintosh Server G3. Other G3-based systems aren't officially supported, but should work.
- 64MB of RAM and 1GB hard disk.
- For NetBoot server: 5GB hard disk, 100BaseT Ethernet network.

What you get:

Core operating system

Includes BSD Unix 4.4

Apache 1.3.4

The world's most popular Web server

WebObjects 4.0.1

Apple's toolkit for building fancy Web applications

Apple file services

Equivalent to AppleShare file sharing

Macintosh Manager and NetBoot server software

Powerful Mac administration tools

QuickTime Streaming Server preview

An early peek at a new QuickTime feature

Mac OS compatibility environment

Lets you run Mac OS applications

FTP, Telnet, NFS, and Sendmail services

Your standard Unix toolkit

Illustrations by Marty Baumann

MAC OS X SERVER	ADVANTAGE	WINDOWS NT SERVER
Power Mac G3, 64MB of RAM, 1GB hard disk	Windows NT...for now	Intel 486/33, 16MB of RAM, 125MB hard disk
Kernel-based architecture with preemptive multitasking and memory protection	We'll call it a tie	Ditto
Unix, Yellow Box, Java, Mac OS compatibility	NT has better Unix support, but no Mac compatibility	Unix, Windows, Java
Apache Web server, WebObjects application builder, file sharing, Mac management	NT has a more complete, albeit less sexy, lineup	IIS Web server, ASP and MTS application builder, file and print sharing, Windows client management, application server, NetShow streaming media server
\$499 (unlimited clients)	OS X is the better deal by far	\$809 (5 clients), \$1,129 (10 clients), \$1,609 (25 clients)*

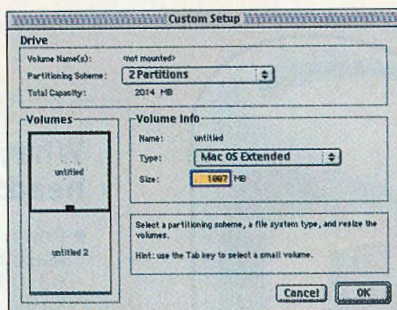
*Windows NT client limitations apply only to file, print, and remote access services.

IV WAYS IT WILL SAVE YOU TIME

If Apple's famous for anything—aside, that is, from regular CEO ousters—it's ease of use. True to form, the company has enhanced Mac OS X Server with a variety of effort-reducing features, from one-button installers to handy setup assistants.

I INSTALLATION IS STRAIGHTFORWARD.

Loading Mac OS X Server onto your Mac takes about 20 minutes, but you spend most of that time watching progress bars—all you need to do is prepare a properly formatted hard disk and then launch the installer. By far the trickiest part is setting up a hard disk for installation. Depending on the mixture of services you plan to run, you may need to give your hard disk separate Mac OS X Server and Mac OS Extended Format partitions. Use Apple's Drive Setup or a third-party equivalent to create these partitions in Mac OS Extended Format, and the OS X Server installer converts one of them to its own native format. Special warning for owners of the new blue-and-white Power Mac G3: If you want to be able to start up your server under Mac OS 8.x instead of OS X Server (which you

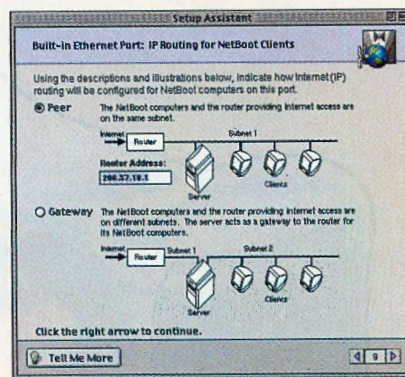


WE'RE SPLITTING OUR HARD DISK into two partitions, one for OS X Server and one for shared Mac files.

can do by holding down the Option key at startup), you must put the Mac OS 8.x System Folder on the hard disk's first partition.

II SETUP ASSISTANTS EASE CONFIGURATION.

After completing the installation, Mac OS X Server walks you through a relatively simple setup process in which it quizzes you about the details of your networking configuration and the services you wish to offer. If you have your IP settings written down beforehand, you



THE SETUP ASSISTANT makes server configuration surprisingly painless.

can run through the setup process and start up a passel of services in under 10 minutes. You can return to the setup assistant at a later date to change the settings, or tweak them via OS X Server's other configuration tools.

III THE INTERFACE IS DIFFERENT, BUT SLEEK.

OS X Server's equivalent to Mac OS 8.x's desktop is the Workspace Manager, a fusion of the NextStep and Mac OS inter-

IV REASONS YOU MAY WANT TO WAIT

While OS X Server delivers a worthy combination of Web, file-sharing, and workgroup management features, there are still a few pieces missing from the puzzle. If you have needs this first release won't meet, here are a few things to look forward to as Apple continues to develop its server operating system.

I THERE CAN BE ONLY ONE MAC OS X.

When the general-purpose Mac OS X ships, it will offer some significant advances over the present incarnation of OS X Server. It will sport a Mach 3.0 kernel with multiprocessing support (coinciding with the appearance of the multiprocessing-friendly PowerPC G4); it will fully implement USB and FireWire; and

the refined interface will bear a closer resemblance to the Mac OS look and feel. Subsequent releases of OS X Server will adopt this improved operating system foundation, evolving into a specialized bundle of services that sits on top of the standard Mac OS X.



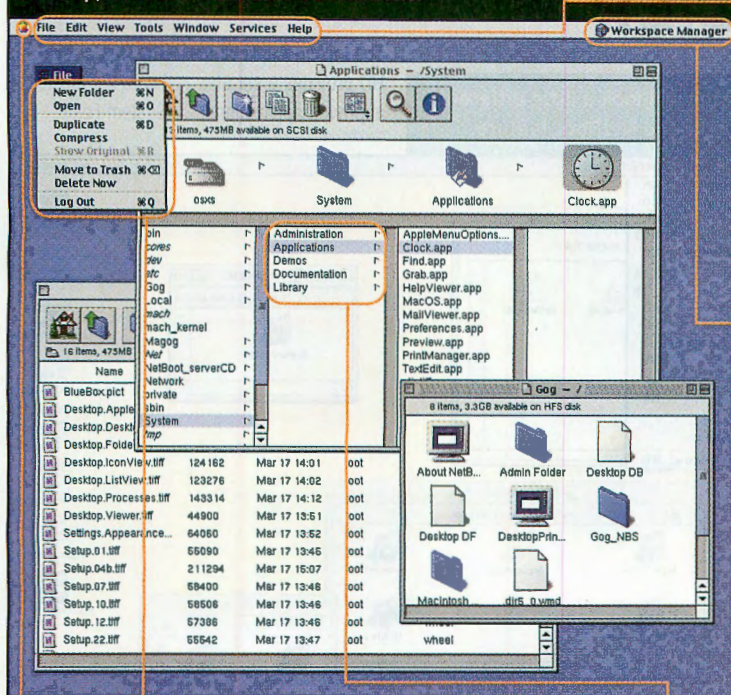
II CARBON IS COMING.

Moving OS X Server to the completed Mac OS X foundation will also let it run Carbon applications—standard Mac OS applications modified to take advantage of the new system software's multitasking, memory-protecting prowess. OS X Server's Blue Box compatibility environment can run

just about any Mac OS program, but Apple doesn't recommend using the Blue Box on a regular basis due to its adverse effects on server performance. With Carbon, you should be able to run your Mac applications side-by-side newfangled server programs without any such performance penalty.



OS X SERVER'S WORKSPACE MANAGER resembles the Mac OS 8.x desktop, with some subtle modifications.



The Apple menu lets you launch applications, modify settings, and launch the Mac OS compatibility environment.

You can tear off menus to create floating palettes.

Double-click a hard disk or folder icon, and you can inspect its contents in NextStep-style Viewer windows as well as the traditional icon and list views.

The menu bar resembles that of the Mac OS 8.x Finder, although the menus are rearranged.

The windows, menus, and other props look identical to those in Mac OS 8.x, but the behavior of desktop objects is very different. We'll be curious to see how many of these NeXT traits remain in the general-purpose Mac OS X interface.

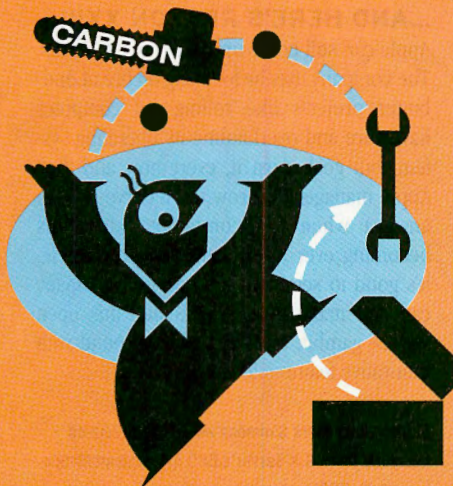
IV IT'S A SERVER... AND A MAC!

Perhaps the most impressive engineering feat in OS X Server is the Mac OS compatibility environment, better known by the nickname "Blue Box." Ironically, it's also the most boring feature, since it provides such a perfect reproduction of the Mac OS 8.x experience. You can run Mac applications, access the network, and view and manage the server's Mac OS Extended Format partitions, and performance is roughly equivalent to that of a normal Mac OS 8.x system.

As the Blue Box is something of a processor hog, Apple doesn't recommend running it while your server is trying to get work done, but it's great to have around for emergencies; when you absolutely have to run a regular Mac application, you can just switch over to the Blue Box temporarily without having to restart your machine.

III OS X SERVER WILL RAID THE APPLESHARE TOOLKIT.

As it now stands, OS X Server isn't a complete substitute for AppleShare IP. The new operating system is a superior platform for Web servers and Apple file services, but it lacks a mail server, support for Windows file-sharing clients, and firewall features. The OS X Server package includes demos of about two dozen third-party applications, which can fill some of these gaps, and Apple ultimately intends to match the entire AppleShare IP feature set in future incarnations of OS X Server.



IV YOU'LL NEED A G3.

Apple has made no bones about the importance of upgrading your hardware, and one glance at OS X Server's stiff system requirements gives you a taste of what's in store for Mac OS X adopters. The minimum required system is a Power Macintosh G3 or Macintosh Server G3 with 64MB of RAM and a 1GB hard disk; other PowerPC G3-based systems, like the iMac and the PowerBook G3, should work but aren't officially supported. As for non-G3 Power Macs, upgraded clones, or any other machine produced before the Jobs regime—well, do you really have to ask? Better start saving your pennies.



III REASONS MAC MANAGEMENT HAS NEVER BEEN EASIER

Running a Web server and sharing files with Mac clients, though they're vital functions that OS X Server handles very well, aren't exactly revolutionary technologies. If you're looking for something mindblowing, then check out OS X Server's amazing NetBoot feature, which combines the flexibility and power of a personal computer with the ease of maintenance promised by as-yet-unproven technologies like the Network Computer. Read on for the shocking details.

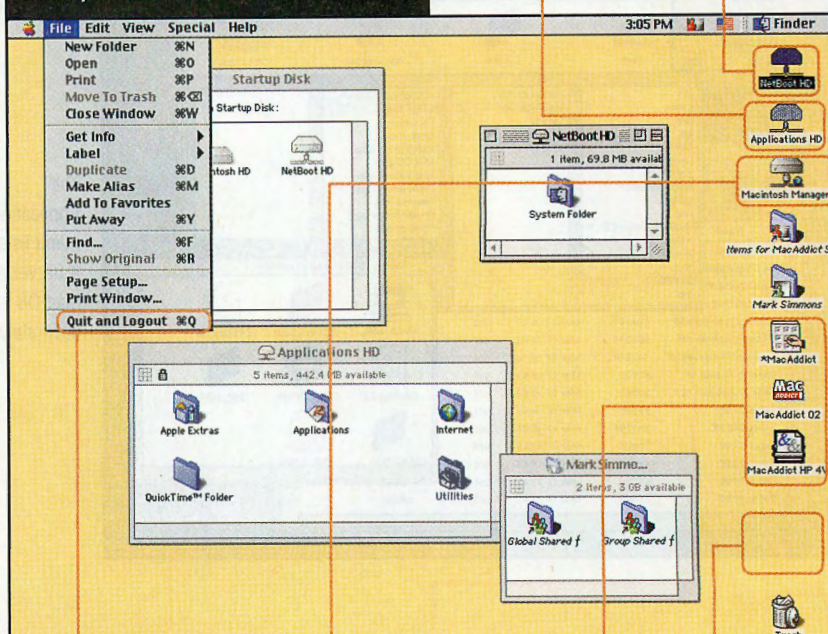
I MANAGEMENT TOOLS FOR EVERY MAC.

First, let's take a look at OS X Server's Macintosh Manager software. This is essentially an update of Apple's At Ease for Workgroups, allowing you to create user accounts, assign them to workgroups, and specify who can access which servers, shared volumes, printers, and applications. When a user logs in from any client machine, the Macintosh Manager server loads her personal preferences, and her own set of network resources appears on the desktop. This stuff works with any Mac that has at least a 68040 processor and Mac OS 8.1.

Your desktop will look a little different when you use the NetBoot feature.

The locked Applications HD provides a set of approved applications.

The NetBoot HD hosts the master System Folder.



In NetBoot land, you can quit the Finder and log back in whenever you like.

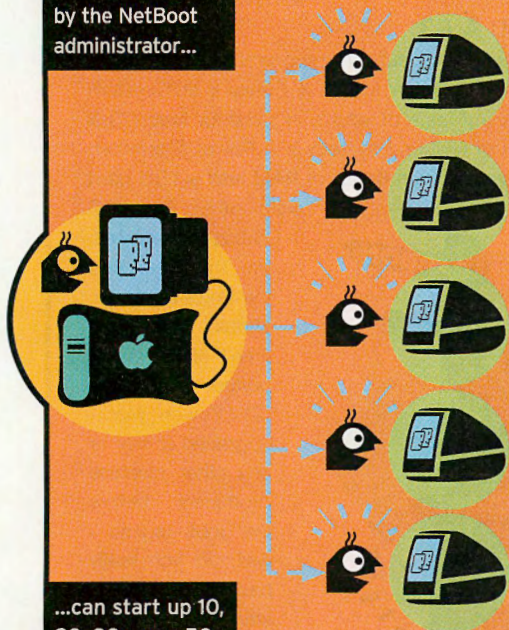
The Macintosh Manager server contains personal, groupwide, and global shared folders.

We've also set up a couple of servers and desktop printers to mount at startup.

Look, Mom, no local hard disk! Your administrator can hide the Mac's built-in disk.

NETBOOTING IS FUN

A single system folder maintained by the NetBoot administrator...



...can start up 10, 20, 30, even 50 Macs at the same time!

II DOZENS OF IMACS CAN BOOT FROM A SINGLE SYSTEM FOLDER.

Centralizing user preferences and resources is nice, but Apple's NetBoot technology takes Mac management to a whole new level. Hook up an iMac or a new blue-and-white Power Mac G3 to your network, start it up while holding down the N key, and it can load an entire system folder from your OS X Server machine. Users can't modify the master System Folder, so they can't damage their systems, and everyone will have the same fonts and extensions. For complete idiot-proofing, the administrator can even hide the client machines' built-in hard disks. A single NetBoot server can support up to 50 clients on a 100BaseT Ethernet network.

III NETBOOT IS WEIRD BUT COOL.

Above you see a sample of what the world looks like through the eyes of a NetBoot user. The combination of Macintosh Manager and NetBoot makes it possible to create a customized, controlled environment for each user—one any machine on the

network can access, and one you can upgrade by changing a single System Folder on a single server. Which leads us to our last reason why you should take note of Mac OS X Server...

...AND HERE'S REASON XXIII.

Apple can still come up with cool new ideas. The company may be focusing on bread-and-butter projects like rolling out computer hardware and overhauling its operating system, but gosh darn it, every now and then Apple manages to throw out a curve ball. In an era when the computer industry is becoming ever more staid and predictable, it's good to see that the Cupertino company can still make gutsy moves like this open source gambit, and break new ground with innovative features like NetBoot.

Senior Editor Mark Simmons would like to remind everyone that OS X Server's BSD 4.4 implementation is not fully POSIX compliant, as it makes him sound really smart.

CHECK OUT
OUR SOFTWARE
ON THIS
MONTH'S CD!

Some Internet companies are like Big Brother.
We're more like the cool cousin with the iMac™.

EASY SET-UP, INCREDIBLY
FAST CONNECTIONS, KILLER
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by Kevin Savetz



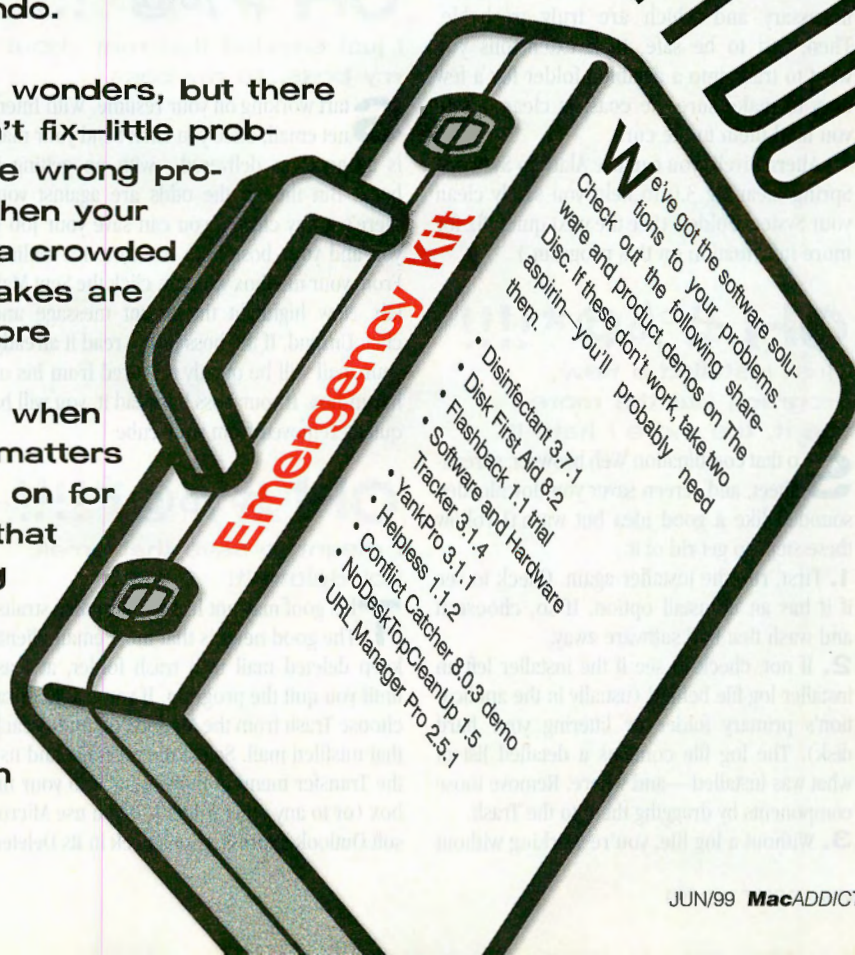
When Undo Just Won't Do

Sometimes we Mac users get a little too sure of ourselves. Overloaded with false confidence, we then take wild and crazy shortcuts, secure in the knowledge that should we screw up, help is only a keystroke away. The allure of Undo is strong—after all, it's in almost every application, waiting to catch us after any misstep. There is no human error, large or small, that can't be fixed by pressing Command-Z or reaching for the ever-present Edit menu and choosing Undo.

Or is there?

The truth is, Undo works wonders, but there are some things it just can't fix—little problems, such as launching the wrong program, and big ones, like when your PowerBook walks away in a crowded airport. Just about all mistakes are undoable, but some are more undoable than others.

Do you know what to do when Undo just won't do? Take matters into your own hands. Read on for a laundry list of problems that Command-Z can't fix, along with their solutions. We'll also arm you with enough hints and tricks to get you out of just about any jam—or help you stay out of it in the first place.





What to Do When Undo Just Won't Do

undo

OH #%@*!!!!

I was straightening up my System Folder and threw out all the wrong extensions. Now I can't get Myth to run!

So you went on a cleaning frenzy and purged your System Folder of all sorts of files you didn't need—or so you thought? Start the healing process by reinstalling any programs that you may have crippled with your cleaning. Everything from system software to your favorite game can hinge on correct placement of extensions. In fact, a missing extension can prevent your Mac from starting up at all. If this is the case, try booting while holding down the Shift key to disable all extensions and control panels. If that fails, you should be able to boot from the emergency CD or floppy that came with your Mac.

The next time you get that urge to purge your hard drive, visit Extension Overload (<http://www.mir.com.my/~cmteng>) first. This useful resource explains the true purpose of hundreds of extensions and control panels, providing you with the info you need to make informed decisions about which add-ons are necessary and which are truly trashable. Then, just to be safe, tuck extensions you want to trash into a disabled folder for a few days to make sure the coast is clear before you haul them to the curb.

Alternatively, you can use Aladdin Systems' Spring Cleaning 3.0 to help you safely clean your System Folder. (See the next quick fix for more information on this program.)

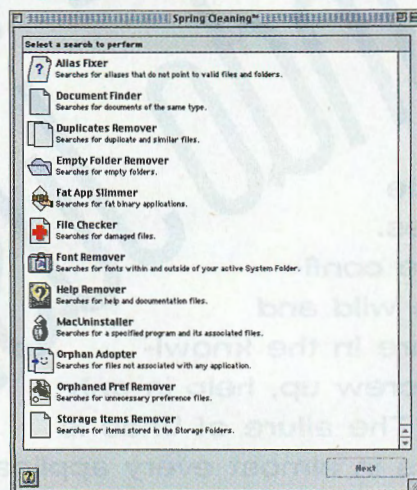
OH #%@*!!!!

I just installed a new program, but the more I use it, the more I hate it.

So that combination Web browser, spreadsheet, and screen saver you downloaded sounded like a good idea but wasn't? Follow these steps to get rid of it.

1. First, run the installer again. Check to see if it has an uninstall option. If so, choose it and wash that bad software away.
2. If not, check to see if the installer left an installer log file behind (usually in the application's primary folder or littering your hard disk). The log file contains a detailed list of what was installed—and where. Remove those components by dragging them to the Trash.
3. Without a log file, you're working without

a map. You can start by throwing out the program's primary folder, but who knows what else its installer may have hidden on your system? An alternative to scouring your system for left-behind software bits is to use Aladdin Systems' Spring Cleaning 3.0 (\$49.95, 800-850-3388, <http://www.aladdinsys.com>). This handy program can uninstall any application and completely remove its associated files. You can also try Yank, a \$15 shareware tool that can uninstall software and clean up your bulging Preferences folder.



SPRING CLEANING UNINSTALLS UNWANTED APPS and keeps your hard drive free of debris.

OH #%@*!!!!

I just emailed that rant about my boss...to my boss.

Start working on your resume. With Internet email, once you click Send your mail is as good as delivered—with no getting it back. But though the odds are against you, there's a tiny chance you can save your job if you and your boss both use America Online. From your mailbox window, click the Sent Mail tab. Now highlight the errant message and click Unsend. If the boss hasn't read it already, your mail will be quietly removed from his or her in-box. If your boss has read it, you will be quietly removed from your cube.

OH #%@*!!!!

I meant to save that email, not delete it!

This goof may not leave you in dire straits. The good news is that most email clients keep deleted mail in a trash folder, at least until you quit the program. If you use Eudora, choose Trash from the Mailbox menu to reach that misfiled mail. Select the message and use the Transfer menu to move it back to your in-box (or to any other folder). If you use Microsoft Outlook Express, take a peek in its Deleted

Messages folder where your email is hiding, then drag it back to the appropriate folder.

(By the way, America Online is once again the exception to the rule. When you click the Delete button in the AOL mail folder, that message is gone for good.)

OH #%@*!!!!

I was going to write down my Internet connection settings tomorrow (I swear), but I'm having problems getting online today.

Sorry, there's no magic bullet for this one. Pick up the phone and call your Internet service provider. Get the right information, including your IP address and subnet mask, router address, DNS server, and mail server, and for goodness' sake write it all down. Then tape the settings notes to your modem—unless it's an internal one, in which case you might just want to post your POP settings in one exciting diary entry.

OH #%@*!!!!

I launched the wrong program. How do I stop it?

Press and hold Control-period while the application is loading, and it will stop in its tracks. Maybe. If not, press Command-Q and get on with your life. If you don't have a life, then go read the *Letters* section.

OH #%@*!!!!

I hit the Help key instead of Delete. Man, I hate it when I do that!

Who put the Help key so close to the Delete key? It doesn't matter: This fat-fingered blunder is an easy one to prevent. Download Helpless, a \$10 shareware add-on that disables that pesky Help key. (When you really do need help, you can still find it in the menu bar.) Helpless is available at <http://sodium.ch.man.ac.uk/pages/redpoint.html>.

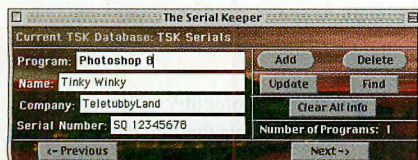
OH #%@*!!!!

I reinstalled a program but lost its registration code.

First, check the floppy disk or CD-ROM you used to install the software. Is the registration code printed there? How about in the manual? No? Then it's time for tech support. Just call up the company and ask for your code. Because you sent in the program's registration card (you did send it in, right?), you should be in the company's database.

In the future, keep a file with your software

serial numbers and shareware registration codes. Software & Hardware Tracker is a collection of FileMaker Pro databases that helps you store and organize registration codes, serial numbers, and other notes about your computer products. It costs only \$25, but you'll need FileMaker to use it. If you don't own a copy of FileMaker, try Steven Byrd's The Serial Keeper, a simple stand-alone database for tracking serial numbers. It's free.



IF YOU KEEP LOSING TRACK of your software serial numbers, The Serial Keeper's simple database could be your salvation.

OH #%#@*!!!!

I caught a virus from someone. (I won't mention any names because the person I caught it from is really, really nice and didn't do it on purpose.)

Do you use protection? If it's your Mac that's caught the virus, you need to use an antivirus program to expunge the infection as soon as possible. The longer you wait, the greater the chance it will corrupt your precious files. If you already have a commercial program such as Norton AntiVirus (\$69.95, Symantec, 541-334-6054, <http://www.symantec.com>), make sure it has up-to-date virus definitions, then use it. To get the latest definitions, visit the virus software maker's Web site or phone its customer service department.

If you don't have an antivirus application, you need to get one. Bad news for us cheap-skates: You'll have to pony up the cash for a truly trustworthy antivirus tool. There are no free or shareware programs capable of scanning for all Mac viruses. The best free option, Disinfectant 3.7.1, is no longer being updated to catch new viruses. If you can't or won't pay for a commercial program, using Disinfectant is better than nothing. But if your computer is harboring a recent strain, Disinfectant may be powerless to help.

Remember that antivirus software won't work unless you use it. Running a thorough scan once a month should be enough to keep most computers clean. However, you'll want to run it more often if you download lots of files from the Internet or frequently swap software or documents with associates.

Even if you use virus protection, back up your data regularly. And don't keep just one backup—rotate among several sets of back-

ups. That way, even if your computer does get infected, you can be sure you've got at least one safe copy of your data.

OH #%#@*!!!!

I lost the manual to my iMac, and now I need it to figure out how to install RAM.

First of all, installing RAM in an iMac is better left to pros—it's not exactly easy to do. Your best bet is to order extra RAM right off the bat and have it installed in the store before you take your iMac home. If, however, the cuddly creature is already snug on your desk and you're in the mood for a zany adventure, you can refer back to *MacAddict's* "iMac Inside" (Nov/98, p46) for a detailed how-to. And if you threw out that issue (for shame!), you can look for the manual online. Most companies' Web sites offer downloadable documentation in Adobe Acrobat format. Apple, for instance, has a Web manual archive for just about all of its hardware and software; just visit the Apple Product Documentation Archive (<http://support.info.apple.com/manuals/manuals.qry>).

If you lose a product manual and can't find it online, call the manufacturer's customer service and explain your problem; the company may be able to replace your manuals for a nominal charge. Or check out the awesome selection of computer books from PeachPit Press (<http://www.peachpit.com>) for more detailed—and more entertaining—information.

OH #%#@*!!!!

I threw out an important file, then emptied the Trash.

When it comes to Mac files, Symantec's Norton Utilities (\$99.95, 541-334-6054, <http://www.symantec.com>) is your personal trash scavenger. Its UnErase tool slogs through the remains of discarded files on your hard drive and does its best to recover the ones you accidentally trashed (see "Dumpster Diving" at right). There's no guarantee that your deleted files will still be around, but you can increase their chances of survival by not saving anything to the drive until you use Norton.

OH #%#@*!!!!

I switched Web browsers and lost all my bookmarks!

Switching to a different browser shouldn't mean losing all your bookmarks. Here's what to do if you're moving from Netscape Navigator to Microsoft Internet Explorer.

1. In Navigator, select Edit Bookmarks from the Bookmarks menu. Then choose Save from

the File menu to save your bookmarks to your hard drive as an HTML document. Name the file "moving.html."

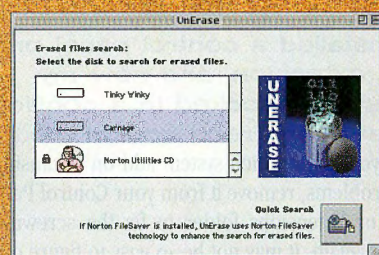
2. Open Internet Explorer. Select Open Favorites from the Favorites menu. Then choose Import from the File menu and select moving.html. Voilà!

If you're switching from Internet Explorer to Navigator, do the following.

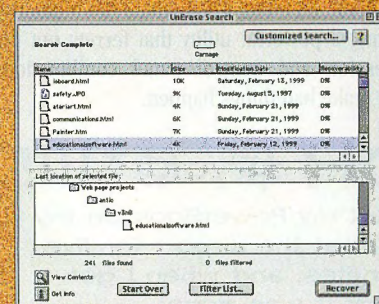
1. Select Open Favorites from Internet Explorer's Favorites menu. Choose Export from the File menu to save your favorites (again, name it "moving.html").

Dumpster Diving

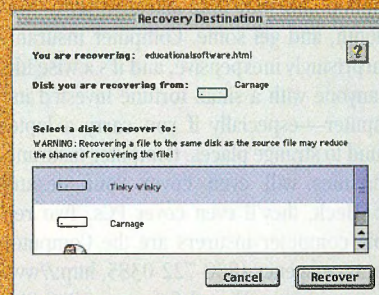
Trashed your Trash and now you want it back? Roll up your sleeves and start digging....



1 To salvage a deleted file with Norton Utilities' UnErase function, first choose the disk where you had the unlucky file stored.



2 Next, select the file from the list of deleted items. Some items may not be recoverable. If you're not sure a file is the one you need, use the View Contents and Get Info buttons to glean more information.



3 Finally, choose a drive to store the recovered file. For best results, recover to a different place, such as a Zip disk or a floppy.



What to Do When Undo Just Won't Do

undo

2. Switch to Navigator and select Edit Bookmarks from the Bookmarks menu. Choose Open Bookmarks File from the File menu to import the bookmarks.

If you want to share bookmarks between both browsers, or if you're simply looking for a better bookmarking tool, try URL Manager Pro, a \$25 shareware utility. It's browser independent, and it does a better job of organizing bookmarks than either Navigator or Internet Explorer. Find URL Manager Pro at <http://www.url-manager.com>.

OH #%@*!!!!

I installed a control panel or an extension, and now my system is locked in a conflict that even Freud couldn't fix.

If you know which system add-on is causing problems, remove it from your Control Panels or Extensions folder to fix the screwup. Then again, it may not be so easy to figure out which add-ons don't play well together (there could be two or more). For such cases you need Casady & Greene's Conflict Catcher (\$79.95, 831-484-9228, <http://www.casadyg.com>), a powerful utility that ferrets out the extension and control panel combinations that make bad things happen.

OH #%@*!!!!

I left my PowerBook on my seat at the airport for five minutes, and when I got back it was gone!

This is the mother of all undoables. First file a report with the police. Then contact your computer-insurance company to report the theft and get a check to replace your Mac.

What? You don't have computer insurance? Then hop into your time machine, jump back a month, and get some. Computer insurance is surprisingly inexpensive, and it's a wise idea for anyone with a small fortune invested in a computer—especially if you carry a laptop around to strange places. Computer-insurance companies will even cover your desktop Mac. Heck, they'll even cover PCs. Two reputable computer insurers are the Computer Insurance Agency (800-722-0385, <http://www.computer-ins.com>) and Safeware (800-800-1492, <http://www.safeware.net>).

The cost to insure your computer depends on how much coverage you want and where

you live. A California resident can insure up to \$5,000 of equipment against most kinds of catastrophes (except earthquakes) for \$69 a year through Safeware. At the Computer Insurance Agency, a \$5,000 policy that includes quake coverage costs \$125 a year.

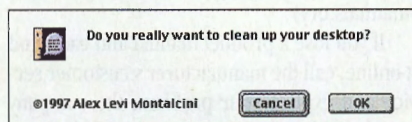
OH #%@*!!!!

I accidentally chose the Finder's Clean Up command and messed up my perfect desktop icon arrangement.

Step one: Put those misplaced icons back where they belong for the last time.

Step two: Install Alessandro Levi Montalcini's NoDeskTopCleanUp (\$10, <http://www.montalcini.com>). This nifty shareware control panel lets you add a confirmation dialog box to any menu item. NoDeskTopCleanUp gives you a chance to opt out when you accidentally choose Clean Up. It also helps clumsy mousers avoid accidental shutdowns and restarts.

Step three: See an analyst about your unbecoming anality.



WITH THE NODESKTOPCLEANUP SHAREWARE installed, this little window stands between you and accidental reorganization of desktop icons.

OH #%@*!!!!

I threw out the disk that came with my scanner/printer/digital camera, and now I can't figure out how to make it work.

This is the reason they invented the Web. Every hardware manufacturer worth its salt has a Web site with downloadable drivers. Point your browser to the company's site, download the appropriate software, and you'll be printing, scanning, and downloading pictures from your camera in minutes.

OH #%@*!!!!

I need just one...more...Undo.

Programs with multiple levels of Undo are wonderful, but invariably you need just one more Undo than the program provides. That's no problem if you use Aladdin Systems' Flashback (\$49.95, 800-850-3388, <http://www.aladdinsys.com>). This program lets you revert to any earlier version of a document: Every time you save, it creates a permanent record that won't get nuked when you save

again. Not only can you revert to the last saved version of your file, you can jump back to the previous saved version, or even all the way back to your first draft.

OH #%@*!!!!

I was canoeing down the Yangtze River while putting the finishing touches on my latest travel guide, when the canoe tipped over and I lost everything!

When your computer is home to irreplaceable data that you haven't backed up, and that computer endures a catastrophe—such as a fire or flood—you may think your ship is sunk.

But don't give up. Your precious data may still be clinging for dear life to those hard disk platters, and a data-recovery service just might be able to retrieve it intact. Leaders in the field include DriveSavers (800-440-1904, <http://www.drivesavers.com>) and Datarec (800-563-1167, <http://www.datarec.com>). Such services are expensive—DriveSavers says its average invoice is \$800, but prices can range from \$200 to \$2,000. Then again, that may be a small price to pay to rescue your invaluable data from a burnt, crushed, or soggy computer.

The folks at DriveSavers also say that "normal, everyday failures" account for the vast majority of the work they do. Mundane digital disasters like data corruption far outnumber dramatic ones like fires and floods. No matter what the eventual fate of your computer, a good backup strategy is all it takes to avoid data loss. Back up often, and keep your backups offsite. Although that sounds like a hassle, it doesn't have to be. Dantz's Retrospect Express (\$49.95, 800-225-4880, <http://www.retrospect.com>) can back up files to removable media or to an Internet FTP site without much fuss.

OH #%@*!!!!

I installed a plug-in that I needed to access this really cool dancing-hamster site, and now my Web browser keeps crashing.

Removing a misbehaving browser plug-in is like removing a tick from a dog, except no one has to be tested for Lyme disease. Just open the plug-ins folder inside your browser's folder, find the offending add-on, pluck that bugger out, and toss it in the Trash. Finish the job by quitting and restarting your browser.

Kevin Savetz (savetz@northcoast.com) writes about Macs and is an avid collector of vintage computers.

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- Perfect for Web pages, e-mail and other Internet use



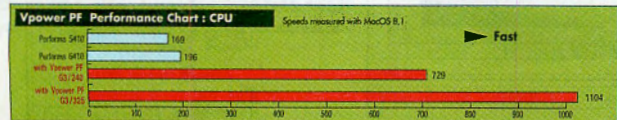
\$149

Apple 54, 55, 64, 65 20th Anniversary Super Mac C500



"Freakin' Awesome"—MacAddict

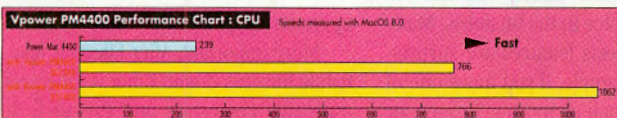
Owners of the 54xx, 55xx, 64xx, 65xx and 20th Anniversary Macs are no longer left out in the cold! Keep your machine at the forefront of PowerPC technology simply by plugging a Vpower G3 upgrade into its Level 2 cache slot. New copper chip technology runs cooler and faster than ever, making the 320/325-MHz upgrade particularly ideal.



Power Mac 4400 StarMax 3000 & 4000

"[H]efty speed boost"
—MacWorld

The word is out: **Macworld** Vimage is the industry leader when it comes to producing innovative upgrade solutions for "dead-end" machines. Simple, plug-and-play installation allows you to enjoy all the benefits of a G3 machine in just minutes. There's never been a better time to take your computer to the next level of performance.



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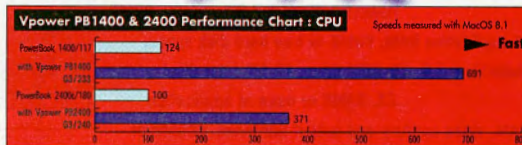
400MHz ZIF upgrade
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for your Mac!**

NEW PowerBook 2400 & 1400



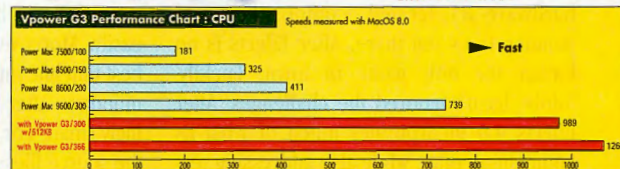
Installing a Vpower G3 upgrade turns your PowerBook 2400 into the fastest notebook computer in the Mac universe! And high-speed combined with low battery consumption make the PB 1400 G3/233 the winner in its class!

As seen in MacWorld
March 1999



PCI Power Mac

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Vpower PB 1400 G3/233	Power Book 1400	G3/233MHz	512KB/117MHz	\$ 339
Vpower PB 2400 G3/320	Power Book 2400	G3/320MHz	1MB/160MHz	\$ 899
Vpower PM 4400 G3/240	Power Mac 4400,7220 Motorola Star Max 3000, 4000 series	G3/240MHz	512/120MHz	\$ 289
Vpower PF G3/240	Power Macintosh/Performa 54xx, 55xx, 64xx, 65xx, 20th Anniversary Mac Super Mac C500	G3/240MHz	512KB/120MHz	\$ 339

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reviews

This summer you'll be sipping lemonade and making sweet music and graphics.

Adobe After Effects 4.0

MULTIMEDIA



FREAKIN' AWESOME
The most valuable products, the coolest gizmos.



SPIFFY
A solid offering. Overall a good investment.



YEAH, WHATEVER
A few good features, but generally a waste of time and money.



BLECH!
We hate to even blotch our pages with the thing.



FIND A TRYOUT of Adobe After Effects 4.0 on The Disc.

COMPANY: Adobe Systems

CONTACT: 800-888-6293 or 408-536-6000,

<http://www.adobe.com>

PRICE: \$995 standard version, \$2,195 Production Bundle; \$299 upgrade from standard version 3.x, \$1,295 upgrade from version 3.x to Production Bundle

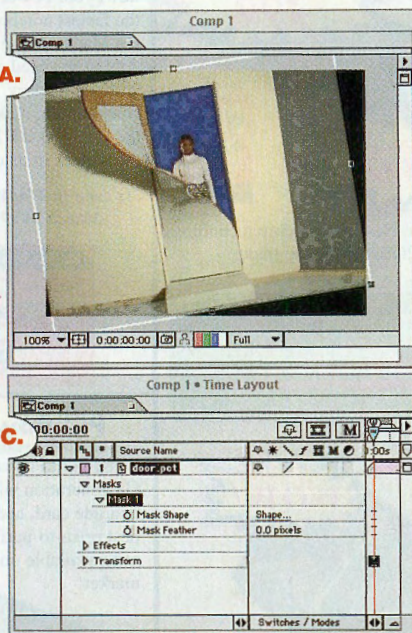
REQUIREMENTS: PowerPC, System 7.6.1 or later, 32MB of application RAM, 80MB of free hard disk space, QuickTime 3.0, CD-ROM drive, 16-bit color display
RECOMMENDED: 63, 64MB or more of application RAM, video capture and output hardware, 500MB or larger hard disk for ongoing work, 24-bit color display

With After Effects 4.0—the new version of Adobe Systems' motion-graphics, compositing, and 2D animation software for film, video, and multimedia postproduction—Adobe completes the task of upgrading all its market-leading applications. After Effects users had to wait nearly four years, but perhaps that's not so bad when you consider that After Effects 3 was so advanced, dependable, and versatile that it became, well, indispensable.

But times have changed. With all the new hardware-accelerated compositing and painting tools out there, After Effects is no longer the only game in town. Luckily, Adobe hasn't ignored the challenges: After Effects 4.0 incorporates much of what its competitors offer, while also addressing version 3's most obvious shortcomings.

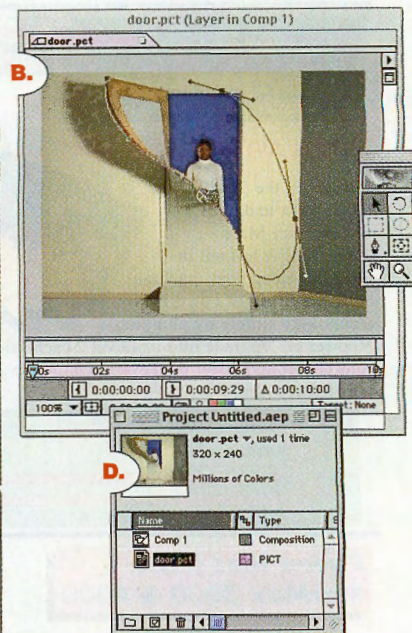
Adobe sells After Effects 4.0 in two versions: the standard retail package for \$995 and the Production Bundle for \$2,195. The Production Bundle includes additional plug-ins aimed mainly at video and film professionals. A hardware key is required to run the Production Bundle plug-ins, but no dongle is needed for the standard package.

As a composition program, After Effects is unmatched. It allows you to assemble and animate layers of QuickTime movies, numbered sequences of PICTs, and files from



Illustrator, Photoshop, Premiere, and other applications rapidly. It can nest compositions (called "comps") within each other, allowing you to build and track complex interrelations between layers and effects easily. Moreover, After Effects still has the best timeline interface in the business. Many mundane After Effects features are surprisingly smart: For example, if you move one of the source files (such as movies, images, or sounds) in an After Effects project to another folder, After Effects automatically recognizes and remembers the change, even if it was not running at the time.

After Effects has long retained a slightly non-Adobe air, a legacy of its roots in now-defunct CoSA. After Effects 4.0 now sports the standard Adobe look and feel, with such previously unavailable niceties as docking palettes and tabbed windows. The downside for longtime users is that many of After Effects 3's key equivalents have been changed, but anyone who's been through a few Adobe



A. PUT LAYERS TOGETHER in the Comp window. Now you can access multiple comps from tabs at the top of the Comp window.

B. WORK WITH EFFECTS and masks in the Layers window.

C. SEE THE TIMELINE of your project in the Time Layout window. After Effects 4.0 lets you color-code layers for easier identification.

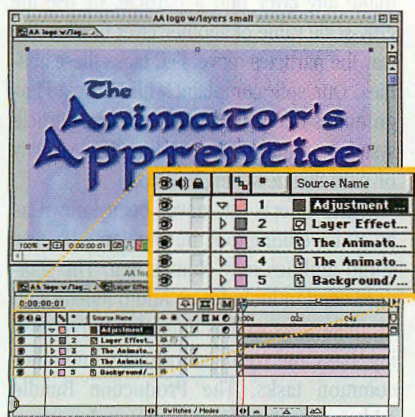
D. DISPLAY AND ORGANIZE all the pieces of your project in the new Project window.

upgrades ought to expect that by now.

More important, After Effects is now more tightly integrated with other Adobe products, especially Photoshop and Premiere. It preserves adjustment layers and layer effects when you import layered Photoshop files as comps, and many After Effects tools, such as the Pen tool, now work just as they do in Photoshop. You can also import layered Illustrator files, with strokes and gradient meshes preserved. But the best new integration feature is that Premiere 5.x projects now come into After Effects comps as individual layers, with each layer arranged in the appropriate sequence in the Time Layout window. This feature eliminates the time-wasting need to compile clips in Premiere

After Effects' New Tools

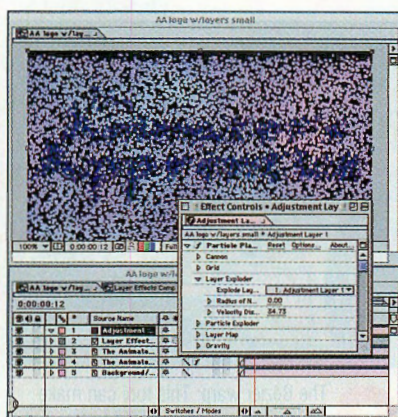
Some of After Effects 4.0's most important new features are Photoshop 5.0-compatible layer import, Adjustment Layers, more versatile Bézier masking, and particle animation. We created this comp directly from a Photoshop 5.0 file using the Import Photoshop As Comp feature. The file had several layers, as well as layer effects and text layers. All converted into After Effects layers without a hitch.



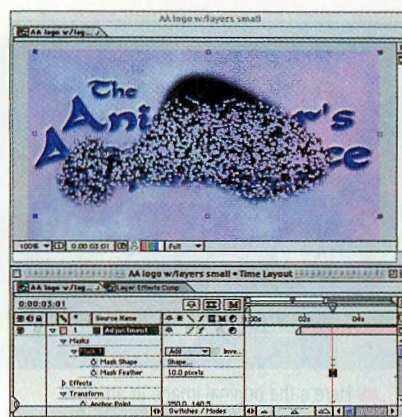
1 To apply an effect to several layers at once, just pop an adjustment layer in front of the other layers and apply the effect to it—no precomposing is necessary.

before moving them into After Effects.

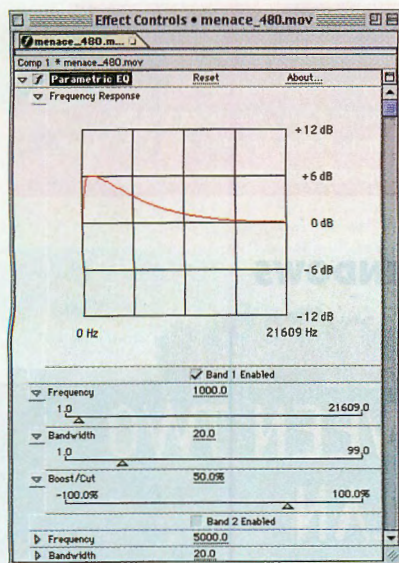
Another time-wasting problem from After Effects 3—the inability to see a comp play back in real time—no longer exists in version 4.0. Taking a tip from Puffin Designs' Commotion, After Effects now quick-renders frames into RAM and plays them back as fast as your Mac can handle. Naturally, the speed



2 We applied the Particle Playground filter to the Adjustment Layer. We've broken the layer into square particles, which will then fall out of the frame.



3 You can now limit the area of an effect by using After Effects 4.0's new Bézier masks. Here we limited the particle effect to the middle of the frame.



AFTER EFFECTS 4.0'S NEW PRODUCTION BUNDLE audio filters include a parametric equalizer for tweaking your project's soundtrack.

of your machine and the amount of RAM available for After Effects limits this capability.

When you're ready to render, a well-designed render queue lets you output several versions of the project in one step—for example, a D-1 version for broadcast video, a 320 by 240 version for CD-ROM, and a 120 by 90 version for the Web. You can specify output in NTSC, PAL, or SECAM, and use 3:2 pulldown/removal to convert the 29.97 fps rate of NTSC video to the 24 fps rate of motion-picture film. After Effects 4.0 exports animated GIFs, too. Moviemakers who must mix different motion graphics media—such as composite video, computer animation, and digitized film footage—will especially appreciate After Effects' high level of control over video field ordering.

The inadequacy of After Effects 3's masking tools plagued the program's users. After Effects 3 allowed you to draw a Bézier mask on any layer, making any nonmasked areas transparent, but it permitted only one mask per layer, which was often inadequate for complex masking jobs. Also, animated interpolations between very different masking shapes yielded unpredictable results.

With the new masking tools, you can not only create up to 128 named masks on one layer, but also import masks from Photoshop or Illustrator and edit them the same

way you would in those programs. You can make masks interact via Boolean operations and use them with effects plug-ins. The Reshape plug-in (included in the Production Bundle) amply demonstrates this ability; Reshape allows you to apply complex transforms defined by the mask shape directly to an image. Interpolation between dissimilar mask shapes is also more accurate and predictable.

Adobe has also improved the way After Effects uses and applies effects. In After Effects 3, a blur could never extend beyond the edge of a layer, and this often resulted in an odd boundary effect. After Effects 4.0 has an expanded effects buffer and allows effects to spread beyond the boundary of the original layer. Likewise, Adobe has upgraded the color correction tools to match those in Photoshop, including the addition of the long-awaited Curves filter.

Some of After Effects 4.0's most important new features are available only in the Production Bundle. These include particle animation tools, audio filters, enhanced motion tracking, and warping tools that rival those in dedicated warping and morphing programs (see the sidebar "Warp Factor Dennis").

In creating the new Particle Playground filter, Adobe wisely steered away from competing directly with the popular but complex

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AUDIO

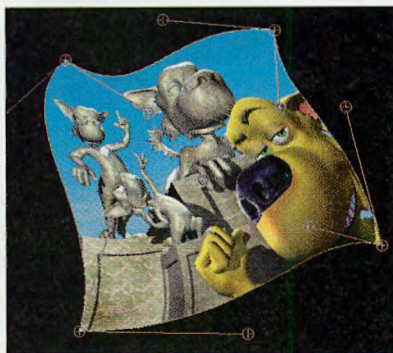
NATIVE POWER PACK II 2.5 p. 53
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Warp Factor Dennis

After Effects 4.0's new warping filters (available only in the Production Bundle) can do the job of dedicated warping and morphing programs such as Elastic Reality.



1 Here's the original image in an After Effects comp.



2 The Bézier warp: This tool can make any layer resemble a curvable piece of paper by turning each corner into a Bézier control point you can move or adjust using the tangent controls.



3 The Mesh warp allows you to mold the entire image like Silly Putty by creating an entire grid of Bézier points.



4 The Reshape filter is very similar to a morphing tool. Here, we've morphed Dennis's head into the shape of a cube.

3D particle system plug-ins available in ICE's Final Effects Complete. Instead, After Effects' easy-to-use particle animation nicely complements FEC's effects. For example, you can make any layer into a particle, or use the gray-scale value of another layer to affect the way the particles move. FEC lacks these abilities. Our sole complaint with Particle Playground is that you can only turn the particle systems on and off by toggling their velocity or particle size setting to zero.

After Effects has never been known as an audio-editing tool, but version 4.0's new audio abilities may change that. The standard version includes an Audio palette with VU meters, as well as filters for stereo mixing, bass and treble adjustment, and other common tasks. The Production Bundle adds a parametric EQ, plus echo, tone, reverb, chorus, and flange.

Which is right for you—the standard package or the Production Bundle? The standard package is a good deal, especially with the new RAM playback, but Adobe saved many of the coolest new features for the Production Bundle. If you're able to shell out the additional \$1,200, the Production Bundle does practically everything you could ask of a compositing program and more. Either way, After Effects 4.0 is still the one indispensable tool for motion graphicists. —Steven Anzovin and Raf Anzovin

GOOD NEWS: New Adobe-standard interface. RAM preview for instant playback. Adjustment layers.

Warping effects. Audio processing and effects. Particle animation. **BAD NEWS:** Some keyboard equivalents have changed.



MAC

WINDOWS

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Native Power Pack II 2.5

AUDIO

COMPANY: Waves

CONTACT: 800-264-0109 or 423-689-5395, <http://www.waves.com>

PRICE: \$500 (SRP)

REQUIREMENTS: PowerPC 603e 120MHz or faster; System 7.6.1 or later; 32MB of RAM for basic processing, 48MB of RAM for multitrack applications; Cubase VST or VST plug-in-compatible applications; 800 by 600 resolution; CD-ROM drive

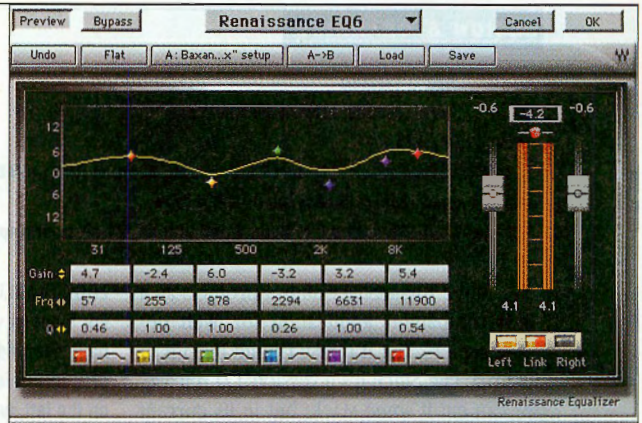
Since the adoption of audio CDs, music purists have lamented the fact that digital music lacks the warmth of analog sound. Waves' Native Power Pack II 2.5 bundle is a collection of four plug-ins (Renaissance Equalizer, Renaissance Compressor, DeEsser, and MaxxBass) that breathes life into the ones and zeros that make up digital sound. Native Power Pack II 2.5 differs entirely from the original Native Power Pack, but like its predecessor it offers superior audiophile effects. If adding the warmth of classical analog recordings to your sounds is important, and if you know your way around concepts like sidechaining, Q, and expansion ratios, this is definitely the package you've been longing for.

Installation is easy once you connect a dongle to your ADB port. In the earlier version, you had to install the plug-ins, then copy and drag them into all the plug-in folders of the audio applications you wished to use—a downright messy process. Now, Waves' WaveShell acts as a gateway to the Waves plug-ins: It's the only app you need in the host applications' folders, because it points to one folder where all the Waves plug-ins reside—no matter how many you have. In addition, Native Power Pack II is compatible with VST,

MAS, Adobe Premiere, AudioSuite, and Sound Edit 16 file formats and can run with 14 different applications.

The bundle's flagship plug-in, Renaissance Equalizer, is an audio wonder. It uses 64-bit processing to deliver ultrahigh resolution, which it dithers back to a lower bit rate at the last stage of output. Its algorithms simulate the filter curves of vintage equalizers, giving you the same sound quality you'd get using a pricey hardware equalizer to process your audio. The result is a luscious, fat sound that most people thought wasn't possible using digital technology. We couldn't believe our ears. Renaissance Equalizer uses quite a bit more processing power than the digital equalizers you find in Peak, Cubase, or other sound-editing apps, but if you want your digital material to sound less digital, this plug-in is unquestionably the one to use. It does an awesome job of emulating the rich, warm flavors of classic analog equalizers.

For mastering and tracking, the Renaissance Compressor plug-in is a gem. It too applies vintage analog characteristics, as

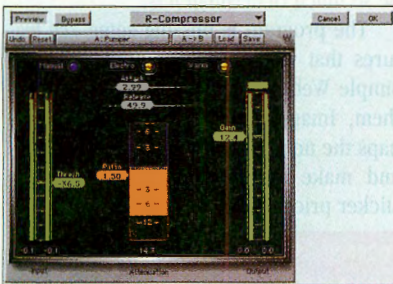


RENAISSANCE EQUALIZER'S TRIM BUTTON indicates a signal 4.2 dB above 0 dB. If you click the button, it automatically reduces the gain by exactly 4.2 dB to avoid clipping. The Link button shows that all changes affect both channels simultaneously.

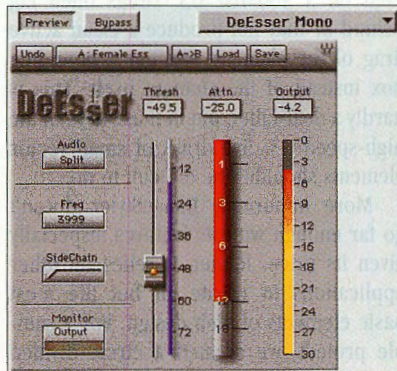
well as pumping, thumping radical edges. Renaissance Compressor's Automatic Release Control (ARC) gives you the option of having the software vary release times in a way that fits the ear's expectations—faster for peak transients and slower for overall RMS (root mean square) levels. ARC makes it possible to control the release in ways no hardware box ever could, and it gives you the sonic advantages of an expensive analog compressor. It's the best of both worlds.

MaxxBass and DeEsser are elegant tools for making the most of your bass and removing those annoying *ess*, *shh*, and *chh* sounds from vocals and speech. These precise, well-designed plug-ins easily correct problems that would be difficult and time consuming to fix using equalization alone.

Native Power Pack II 2.5 is an indispensable set of tools for audiophiles who crave warm, analog-sound processing in the digital domain. Plus, it costs considerably less than what you'd spend on hardware counterparts, and if you bought them separately the plug-ins would cost a total of \$1,100. At \$500, the bundle is a great deal.—*Judy Munsen*



THE ATTENUATION METER IN RENAISSANCE COMPRESSOR shows compression in blue (as above) and expansion in yellow. The rectangle at the top of the Output meter indicates that the automatic limiter is activated to prevent clipping.



HERE WE CONFIGURED THE DEESSER plug-in to remove an extreme female *ess* sound in a voice-over track.

GOOD NEWS: Comes with four quality plug-ins. Produces rich, warm analog sound. Offers simultaneous multiparameter control.

Informative manual. Compatible with VST, MAS, Premiere, and AudioSuite. Relatively inexpensive.

BAD NEWS: Requires previous audio engineering knowledge.





ImageStyler 1.0

DESIGN & GRAPHICS

COMPANY: Adobe Systems

CONTACT: 800-833-6687, <http://www.adobe.com>

PRICE: \$124 (SRP)

REQUIREMENTS: PowerPC, System 7.5.5 or later, 32MB of RAM, 40MB of free hard disk space, 256-color display, CD-ROM drive

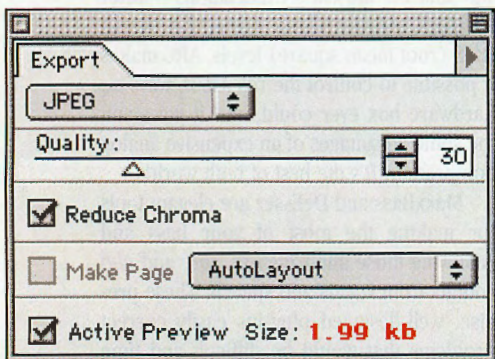
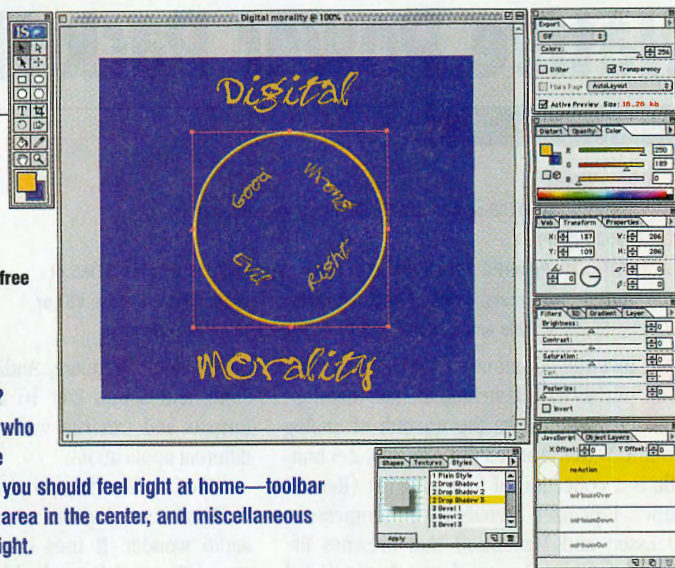
RECOMMENDED: Mac OS 8.0 or later, 64MB of RAM, 24-bit color display

Adobe ImageStyler shows promise as a companion application for Web designers, but it doesn't quite live up to its price tag. Since it's a version 1.0 release, we can cut it some slack, but in its current state (lacking a few critical features) ImageStyler would have worked better as a plug-in to Photoshop or Illustrator rather than as a stand-alone application.

The idea behind ImageStyler is to provide Web professionals with a tool for getting graphics ready to go into Web pages—just as the application's name suggests. By and large, the application does a good job

LOOK FAMILIAR?

For those of you who have used Adobe products before, you should feel right at home—toolbar on the left, work area in the center, and miscellaneous palettes on the right.



IMAGESTYLER'S ACTIVE PREVIEW function lets you quickly optimize your work for the fastest possible load time.

of this. With just a few clicks in the various palettes, Web gurus can add drop shadows, JavaScript actions, blends, embossing effects—pretty much any Web effect you'll see out there today, short of animated flames on a logo (thank goodness).

As well as adding style and functionality to Web graphics, ImageStyler has some great quick-access effects. Attaching URLs to graphics is as simple as entering the URL in the appropriate palette. ImageStyler also comes with a great HTML search-and-replace feature, allowing you to substitute your own custom graphics for generic header tags. With the Active Preview fea-

ture, designers know at a glance just how big their images are. When exporting a graphic, ImageStyler can do everything from saving a simple JPEG to creating an entire layout, slicing the image into appropriate pieces for fast download and generating the HTML code (complete with JavaScript) to render the slices as parts of a table. ImageStyler's HTML is pretty clean, and it even fills in the Alt tags for text—a nice touch. The program does seem a bit slice happy, though. During an export, for example, ImageStyler sliced our sample graphic into 44 pieces, when no more than 20 would have done the trick.

ImageStyler's interface is clean, and you can easily access most of its features through the plethora of onscreen tabbed palettes—if you have a large enough monitor. Oddly, though, the interface seems slow and sometimes reacts unresponsively, even on a 400MHz G3. Drags often lag behind or may not produce a clean active drag of the element; you get a bounding box instead of the element itself. This is hardly a deal-killer, but in these days of the high-speed G3, live drags of small vector elements shouldn't be difficult to do.

More important, ImageStyler doesn't go far enough with its features, especially given its price. Rather, it relies on other applications to create all but the most basic elements of Web design. For a sample project, we created a circle divided into quarters, with each quarter devoted to a link. We also wanted a JavaScript to implement a rollover that would make each quarter change color when a mouse

moved into the quarter's boundaries. Simple, eh? That's what we thought. It took us a while to figure out that to draw a straight line, you have to trick a rectangle into acting like a line. Fair enough. The next step was to produce four quarter circles by masking four circles with four squares so that a quarter of each circle would be visible. No luck. After puzzling over this for a couple of hours, we were faced with the choice of giving up and changing our design idea, or creating that part of it in a more capable application.

There's the crux of the problem with ImageStyler. If users have to change design ideas or switch to other applications to complete simple tasks, then they'll probably use something else for most of their Web work. By including a couple of common vector-graphics capabilities (such as basic Bézier and clipping tools), ImageStyler could be so much richer than it is.

The program is missing some key features that would enable it to work as a simple Web graphics application. Without them, ImageStyler feels incomplete. Perhaps the next version will fill in those gaps and make the program worth its hefty sticker price.—David Reynolds

GOOD NEWS: Quick access to common Web graphics effects. Familiar Adobe interface. Includes Alt tags when building a graphic. Fairly clean HTML code. Nice HTML batch replace.

BAD NEWS: Limited graphics tools. Doesn't work well as a stand-alone application. Interface tags. Expensive for what it offers.

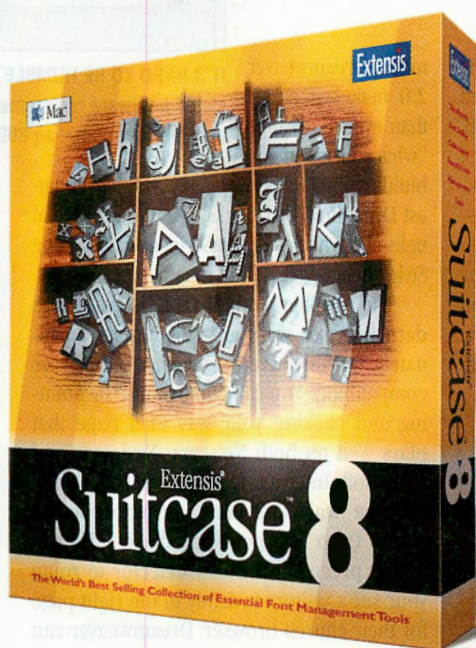


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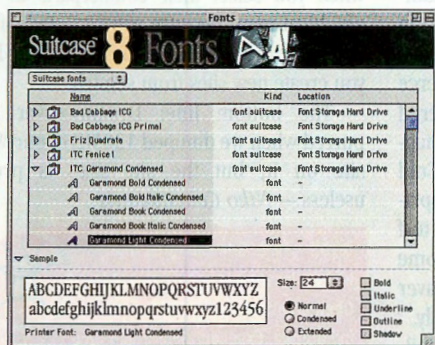


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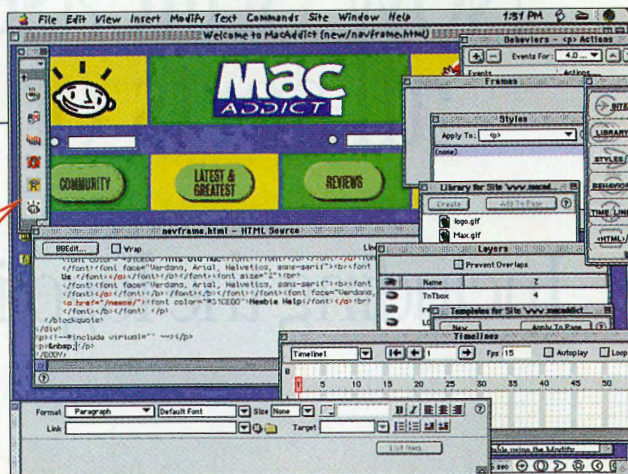
reviews

Dreamweaver 2.0

DESIGN & GRAPHICS

COMPANY: Macromedia
CONTACT: 800-457-1774,
<http://www.macromedia.com>
PRICE: \$299 (SRP), \$269 download without
 BBEEdit, \$99 upgrade
REQUIREMENTS: PowerPC, System 7.5.5 or later,
 24MB of application RAM, 20MB of free hard disk
 space, color monitor capable of 800 by 600 resolu-
 tion, CD-ROM drive

EXTENSIBLE,
 EXTENDABLE,
 CUSTOMIZABLE,
 WHATEVER—you
 can add your own
 behaviors to the
 toolbar.



FIND A
 TRIAL of
 Dreamweaver
 2.0 on The
 Disc.

WYSIWYG. Say it again: What you see is what you get. When we looked at Dreamweaver 1.0 (see May/98, p38), we affirmed its reputation as the first respectable WYSIWYG Web-authoring package because it got the "what you get" part—the HTML source code. Dreamweaver 2.0's HTML tools are even more powerful, offering precise control over HTML formatting and grep find-and-replace functions that make the bundled BBEEdit nearly redundant. In visual

mode, Dreamweaver 2.0 makes it easier than ever to arrange "what you see" while building interactive Web sites with all the latest Dynamic HTML tricks, like the proverbial bells and whistles of JavaScript and Cascading Style Sheets.

The problem with DHTML is that those darn browser wars are still raging. Fortunately, Dreamweaver is a master of browser compatibility. You can compromise by pointing and clicking your way to a page that plays well on both Netscape Navigator and Microsoft Internet Explorer, or go to the extreme with individual, browser-specific pages (also via point-and-click). There's even a precoded browser detector to route your site's visitors invisibly to the right page for their chosen browser. Dreamweaver can also translate your layer-based design into HTML tables for older browsers. It does a good job, but don't expect the moon—some earlier browsers (3.x) can't handle the content, so you'll get display errors.

DHTML is cool, but dynamic content is where the big bucks are, and here Dreamweaver 2.0 has another trump card: an extensible architecture. Need a spiffy interface on your database-driven or e-commerce Web site? Dreamweaver's got you covered with Dream Templates and advanced tagging options that let you incorporate Cold Fusion, ASP, XML, and nearly any proprietary code you can teach it. This is the turf where complex, data-driven sites become Web apps and extranets, and Dreamweaver 2.0 is poised to integrate them seamlessly.

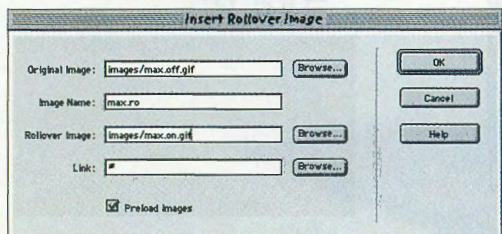
Despite the buzzword factor, extensibility is a good thing. On the low end, it means you can easily configure menu buttons to invoke your frequently used snippets of

IT'S HARD TO BE HUMBLE, but Dreamweaver 2.0 is way too modest in its stated hardware requirements. You may experience code rage if you have only the minimum—an 800 by 600 display and a low-end Power Mac.

code—from a simple Mailto link to just about any item you can enclose in a pair of HTML tags. If you're handy with JavaScript, you can add your own precoded actions, behaviors, and commands to the menu palettes (see "Extensibility 101"). Ironically, the more Web programming you know, the more you get out of this WYSIWYG editor.

Dreamweaver 2.0 addresses all the complaints we had with version 1.0, although it handles some more adequately than others. Version 2.0's interface is much more efficient: It streamlines the JavaScript Behaviors window and most of the Properties Inspectors, rolling two or three separate steps into one. The price you pay is screen space. With a big monitor (preferably two) and a fast Mac (preferably a G3), the program's only real weakness is its new Site View window; it makes even a small site, if poorly organized, a nightmare. However, the site map is configurable, and the directory view identifies files when you select their counterparts in the graphical map. Because you can create files and directories in the map, it's useful when you create new sites from scratch.

The bottom line: Dreamweaver 2.0 purred when we dumped 120MB of our Web site on it, but the site map is pretty useless. —Niko Coucouwanis



PHIEW! THE NEW INSERT ROLLOVER IMAGE box replaces a confusing multistep process.

Extensibility 101

Even if you don't know a lick of JavaScript, extensibility can be yours. These Web sites offer precoded actions, behaviors, and commands that other Dreamweaver developers have built—and they're free for the download.

Dreamweaver Depot

<http://people.netscape.com/andreww/dreamweaver>

Dreamweaver's Fan Page

<http://www.cybernet.ch/users/massimo>

Dreamweaver Bible

<http://www.idest.com/dreamweaver/objects-fr.htm>

Macromedia's Dreamweaver Support Pages

<http://www.macromedia.com/support/dreamweaver>
 Macromedia's site hosts an Extensibility Exchange and newsgroups that are an excellent source of support, both moral and technical.

GOOD NEWS: Sitewide grep find and replace made easy. Extensible. Open architecture and database integration. Excellent before-and-after WYSIWYG in browsers. **BAD NEWS:** Inefficient site map. Understated hardware requirements. Some interface quirks.



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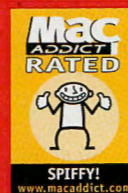
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www.maczone.com

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650-496-6000

MacConnection
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www.macconnection.com

Micro Center
800-743-7537
www.microcenter.com





Klingon Honor Guard

FUN & GAMES

COMPANY: MacSoft

CONTACT: 800-229-2714 or 612-509-7600, <http://www.wizworks.com/macsoft>

PRICE: \$49.95 (SRP)

REQUIREMENTS: PowerPC 603e 180MHz or faster, System 7.6 or later, 32MB of RAM (64MB recommended), 250MB of free hard disk space, 4X CD-ROM drive, Open Transport required for network play, hardware acceleration highly recommended

Based on the Unreal engine that dazzled Mac and PC gamers last year, Klingon Honor Guard blends a solid cinematic story with fast-paced action and offbeat humor to create a fun first-person shooter. The Klingons are the bad boys of the *Star Trek* universe—staggeringly strong, aggressive, and hotheaded. A plot has formed against the emperor, and everyone is implicated in the assassination attempt except you, a mere trainee in the elite Honor Guard. You'll encounter harsh alien environments, the meanest jail scum in the quadrant, and devious traps on your mission to bring the traitors to swift justice.

While many action games hardly let the story get in the way of constant bloodletting, Klingon Honor Guard's missions tightly follow the story as unveiled in cut-scene briefings. The short, mission-focused levels are more linear than in Unreal. Klingon quips and varied settings such as rowdy nightclubs and an impregnable jail make the game feel like a combination of late-night favorites Duke Nukem 3D and Shadow Warrior.

Grisly realism and gallons of pink blood alone don't make for killer action. Fortunately, Klingon Honor Guard flashes the eye-catching lighting effects and smooth explosions we expect from the latest games. Taking advantage of Unreal's core graphics programming, Klingon Honor Guard also adds

neat effects missing from Unreal's basic engine. Pour too much disrupter fire into a hapless enemy, and he vaporizes from the outside in. Blood sprays and fiery explosions leave marks on the walls. But despite the game's generally good visuals, the details have some bothersome quirks, including overpixelated walls and texture overlays (indicating damage) that misalign in places.

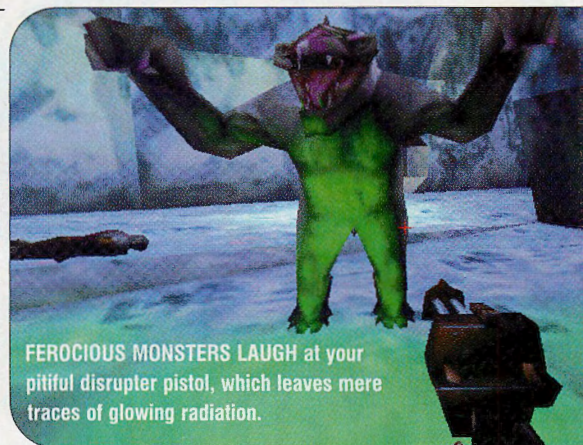
Good weapon design is essential to a first-person shooter. Klingon Honor Guard is true to its Klingon theme, featuring hand-to-hand combat with the Dk-tahg knife or viciously curved Batlith. The guns are a mixed bag, however. Along with the standard energy guns and rocket launchers, you get insane, arena-clearing Armageddon devices. Also, the reloading and weapon-switching animations slow the action and are lethally slow in deathmatches.

A high-quality multiplayer mode is what separates great shooters from the rest, and unfortunately Klingon Honor Guard's deathmatches aren't fun. Poor bot AI scripting and inconsistent map design mar the multiplayer. Unreal established a standard for kick-ass bot matches, whereas Klingon Honor Guard's botched bots spend too much time blowing themselves up.

The game also places heavy demands on hardware. The RAM **THESE KLINGON CAPTAINS MEAN TROUBLE.** Get used to it—you'll spend much of the game fighting these blockily rendered foes.



IS THAT MY BATLITH IN YOUR CHEST? Hand-to-hand combat is key to the honor-driven Klingons, but you'll quickly match this Nausican's firepower.



FEROCIOUS MONSTERS LAUGH at your pitiful disrupter pistol, which leaves mere traces of glowing radiation.

requirements are stiff, and virtual memory helps only so much. Nevertheless, this solid release is the best *Star Trek*-based action game we've seen—or expect to see—for a while. Despite some less-than-Unreal gameplay and a flawed interface design, Klingon Honor Guard offers single-player excitement that any action-crazed gamer can love.—*Samuel Parker*

GOOD NEWS: Engaging solo missions with compelling story tie-ins. Inherits flashy graphics from Unreal engine. Astonishing weapon effects.
BAD NEWS: Poor bot-match implementation. Occasional lackluster visual and level design. Heavy system requirements.



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Kai's Power Tools 5.0

DESIGN & GRAPHICS

COMPANY: MetaCreations

CONTACT: 888-707-6382, <http://www.metacreations.com>

PRICE: \$199 (SRP), \$99 upgrade

REQUIREMENTS: PowerPC, System 7.6.1 or later, 32MB of RAM, Photoshop 3 or later, 50MB of free hard disk space, 24-bit color monitor, CD-ROM drive

As children, we all had toys we couldn't stop playing with. For me, it was a vast Lego collection. Today, it's Kai's Power Tools 5.0. The latest version of this venerable Photoshop plug-ins package is one mind-absorbing toy your mother won't be able to take away from you.

As with Legos, you'd be wise to read the directions before beginning to build your Ultimate Space Station. KPT5 sports a unique MetaCreations interface that takes getting used to. Choosing any of the KPT5 plug-ins warps you into the "Kai OS," a place where shadowed windoids, a gray stone background, and a unique attitude dominate. Go forth bravely, though, because the QuickStart manual provides lots of help.

Once you become familiar with the trippy interface, using the individual plug-ins is pretty simple. ShapeShifter, Blurrrr, Orb-It, Noize, Smoothie, FiberOptix, RadWarp, and a trio of fractal plug-ins make this package one that designers, photographers, and artists can all put to good use.

ShapeShifter is, at its core, a bevel plug-in. It extends the bevel idea by allowing

artists to control material appearance (plastic, metal, and so on), 3D light sources (position, intensity, and color), and more. You can use masks to composite multiple objects, and you can edit bevel paths.

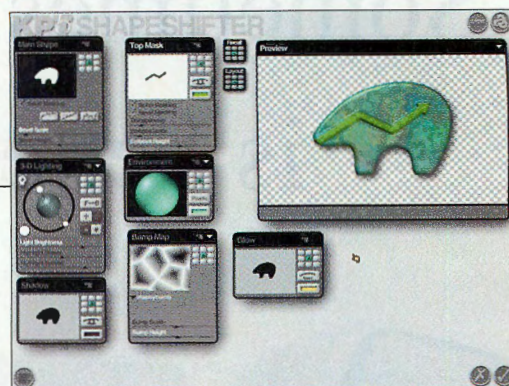
Blurrrr also extends a simple action—the blur—and executes large, real-time previews and 128-bit math. Blurrrr effects include Hi-Speed Blur, Camera Optics, and Zoom Blur. You can control many aspects of a blur, such as radius, angle, and length. If you're still using the blur plug-ins that Adobe Photoshop provides, get this real toy instead.

The Noize plug-in offers preset noises with adjustable frequency. Perlin noise, soft clouds, nebulae, swirls, crumples, and other sounds are available. We found the Noize filter perfect for adding slight variations to otherwise flat patterns, such as grass or water.

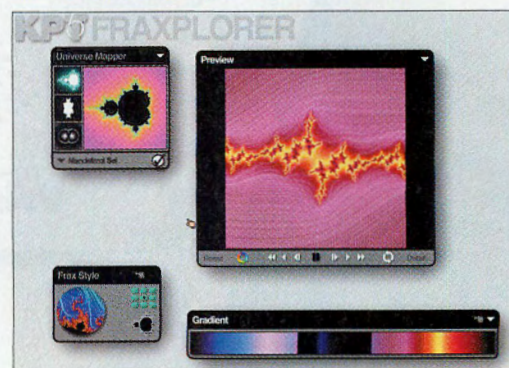
If Noize isn't cool enough for you, try FiberOptix. What good would a cat be without fur? Not much. FiberOptix puts fur on your cat (or just about anything else) with relative simplicity. Want to see your name as a worn, gradient-rich shag carpet? Fire up FiberOptix. Like some of the other plug-ins, it generates masks from 3D data for easy compositing.

For users whose inner child is satisfied with a simple ball, KPT5 provides Orb-It. This aptly named plug-in can make balls out of anything. Apply Orb-It to a layer or selection, then adjust the 3D lighting, color, reflectivity, and more. Wow, balls!

The Smoothie plug-in effectively cleans up dirty masks by blending the edges on black alpha masks in real time. RadWarp does what its



KAI'S POWER TOOLS 5.0 SPORTS A UNIQUE MetaCreations interface and plenty of power for work and play.

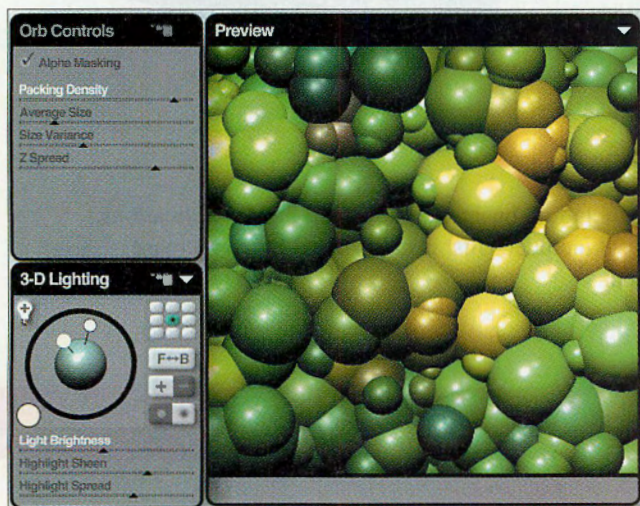


YOU CAN USE FRAXPLORER TO CREATE an infinite variety of fractals and animate them to achieve an otherworldly nirvana.

name says—it radically warps any image to look as if you were viewing it through a funky kaleidoscope.

These plug-ins are great, but they don't hold a candle to KPT5's fractal plug-ins, which include Frax4D, FraxPlover, and FraxFlame. FraxPlover creates stunning scenes that resemble the coolest parts of outer-space movies. After setting the base shape and gradient, this plug-in gives you animation with rewind, step forward, and other features that allow you to sit mesmerized for hours (or until the perfect fractal appears). Frax4D generates fairly realistic multidimensional objects. The coolest of the fractal plug-ins may very well be FraxFlame, which generates fractals in quasi-neon colors. Use it to create your own virtual aurora in seconds.

"Kai's Power Toys" might be a more accurate name for Kai's Power Tools. Sure, you can do real work with these tools, but it's tough to stop playing with them.—Erik J. Barzeski



ORB-IT ALLOWS YOU TO CREATE SPHERES, which can be a solid color or a blend of the colors of the layer you create Spheres on.

GOOD NEWS: Spectacular designs. Amazing variety. More fun to play with than any other filter or plug-in package. Mind trips for hours.

BAD NEWS: Somewhat confusing interface. Runs slowly on anything less than a G3 Mac.



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reviews

reviews

MacLinkPlus Deluxe 10.003

UTILITY

COMPANY: DataViz

CONTACT: 800-733-0030 or 203-268-0030, <http://www.dataviz.com>

PRICE: \$99.95 (SRP)

REQUIREMENTS: 32-bit clean Mac or Power Mac, System 7.1.2 or later, 8MB of RAM, 24MB of free hard disk space, CD-ROM drive

The Mac's file-typing system used to be years ahead of its time—just click on any document and the appropriate application would open it. But there's a dark side to this system: the dreaded message "file 'X' cannot be opened because application could not be found," which you most often see when you try to open a file fresh off a PC or the Internet. Macs have a tough time making sense of these foreign file formats. DataViz's MacLinkPlus Deluxe breaks down the language barriers by offering an easy method to decompress, convert, and otherwise modify file information to make any document compatible with your Mac.

MacLinkPlus Deluxe acts as a massive

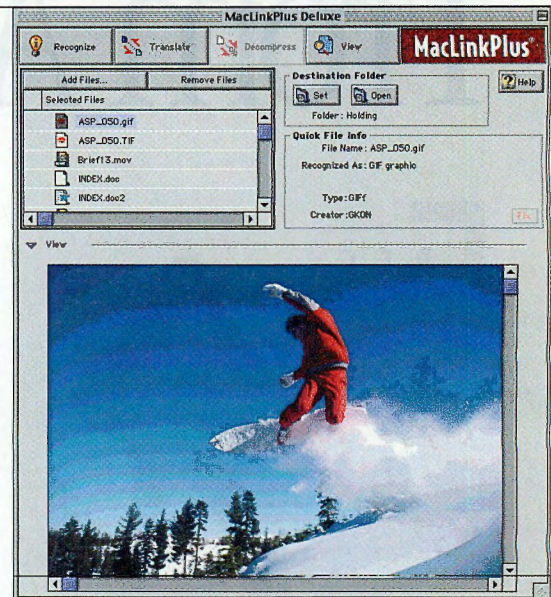
storehouse of filters for word processing, database, spreadsheet, and graphics files. Using either its own interface or Mac OS Easy Open, MacLinkPlus Deluxe can convert a document from almost any source imaginable into almost anything else. It also lets you read from (but not write to) HTML files.

Conversion performance between file formats was solid in our tests, but MacLinkPlus's HTML support was extremely marginal. It had a real problem locating and converting graphics, often crashing in the process. (Microsoft Word 98, by contrast, opened the same HTML documents without complaint, graphics and all.)

MacLinkPlus Deluxe also acts as a one-stop de-archiving application. It supports all the major Mac, PC, and Internet formats, including Stuffit, CompactPro, Zip, GZip, UUencode, MIME, and Apple's BinHex. It thus saves you a lot of time and energy normally spent sorting through multiple de-archiving programs.

As a bonus, MacLinkPlus allows you to change any file's type and creator, either directly or by asking the program to "recognize" and then "fix" the file type of a document. For example, if you bring in a JPEG that the Finder shows as a text document, MacLinkPlus can fix it so that your favorite graphics viewer opens it. The clever preview window can display the contents of a graphics or text file without opening it.

Despite all its useful features, MacLinkPlus is rather inflexible. It doesn't let you direct file de-archiving into one convenient folder, so things can get pretty messy. The program's weak image support further re-



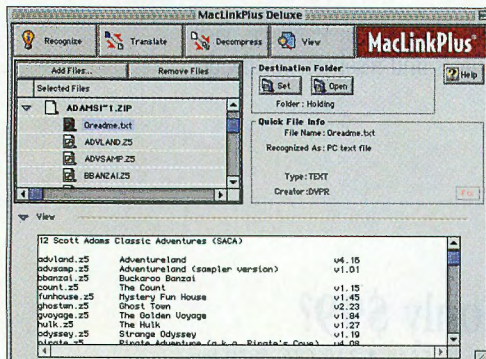
MACLINKPLUS DELUXE BROADENS YOUR HORIZONS with a variety of file types.

duces its usefulness: It always writes JPEGs at 75 percent quality and TIFFs as LZW-compressed RGB files.

We expected greater flexibility and depth from MacLinkPlus Deluxe. The price gets you a lot of features, but consider some cheaper alternatives: Aladdin Systems' \$30 shareware DropStuff beats its archive handling; virtually any shareware or commercial graphics application, such as GraphicConverter or QuickTime's PictureViewer, outshines its image-conversion capabilities; and the \$39.95 File Buddy can alleviate many of the same file-type headaches as MacLinkPlus Deluxe.

That leaves the word processing, database, and spreadsheet filters. Because the import-export filters of most office applications are not as extensive as MacLinkPlus's, you may want the impressive array it offers. Otherwise, you simply don't need MacLinkPlus Deluxe. —Jason Compton

MACLINKPLUS DELUXE HAS TONS OF conversion options, if you need them.



YOU CAN DE-ARCHIVE FILES and even browse through read-me files while they're still compressed.

GOOD NEWS: Solves Internet file-typing problems. Translates and converts a wide variety of file formats. Preview window lets you quickly see a file's contents without opening it.

BAD NEWS: Annoyingly inflexible navigation. Subpar HTML support. Clumsy interface. Lower-cost shareware programs offer many of its features.





Hoyle Casino

FUN & GAMES

COMPANY: Sierra Attractions

CONTACT: 800-757-7707 or 425-746-5771,

<http://www.sierra.com/attractions>

PRICE: \$29.95 (SRP)

REQUIREMENTS: PowerPC, System 7.5 or later, 16MB of available RAM, 40MB of free hard disk space, 2X CD-ROM drive, 640 by 480 monitor with 256 colors

RECOMMENDED: G3, System 8.1 or later, 32MB of RAM, 4X CD-ROM drive, 24-bit color display

Sierra Attractions' Hoyle Casino offers eight different games of chance (blackjack, craps, keno, poker, pai gow poker, roulette, slots, and video poker) and purports to teach you how to win at each of them. No matter which game you prefer, Hoyle Casino has your bet covered. Many of the "100 variations" of games the box touts—this is especially true of slots—are

MOST OF THE SLOT GAMES ARE SIMILAR, offering different graphics and slight payoff variations. The Progressive game shown here is the only slot with multiple pay lines.



merely different betting levels or graphics, but at this price you can't complain.

What makes Hoyle Casino better than other parlor game programs is its Practice Mode, which unobtrusively watches your play and alerts you to bad bets, such as hitting on a hard 18 in blackjack. You can also request hints on a case-by-case basis, although the tutorial covers only the basics rather than the fine points of winning play.

Recreational players will not only enjoy Hoyle Casino, they may even improve their game. Hard-core betters, on the other hand, will find gameplay a little too slow

even if they turn off the optional (and annoying) character animations and commentary. The inability to fine-tune the action in certain features, such as the house rake and drop and the betting structure, is also regrettable.—*Owen W. Linzmayer*

GOOD NEWS: Good variety of games.

Inexpensive. Practice mode and tutorial help teach basics.

BAD NEWS: Slow gameplay. Character animations and table chatter annoying. Not enough control over settings to satisfy hard-core gamblers. Internet play available only in Windows version.



Jazz Jackrabbit 2



FUN & GAMES

COMPANY: Logicware with Gathering of Developers

CONTACT: 888-564-4245 or 626-938-0104, <http://www.logicware.com>

PRICE: \$29.95 (SRP)

REQUIREMENTS: 100MHz PowerPC or faster, System 7.5.3 or later, 16MB of available RAM, 45MB of free hard disk space, 16-bit color display, 4X CD-ROM drive

Just when you thought it was safe to go into the carrot patch, that wascally wabbit Jazz is on the prowl again, shooting at every creepy turtle, poisonous goon, and evil ghost that twitches. Jazz is back, and so is the vile turtle king Devan Shell. This time, Jazz and his wacky brother Spaz combat the terrible terrapin, who has stolen a 12-carrot diamond ring and plans to use it to concoct a time machine and wipe out all rabbit civilization by bumping off a few ancestors before the birth of Jazz and Spaz.

To stop this hare-razing plan, you can dive into the past as either Jazz or Spaz. Both have unique abilities: Jazz's rotating ears help him hover like a helicopter, and Spaz's wicked side kick can knock down

walls. This makes for entertaining play, as do the three levels of difficulty. The harder the setting, the more villains you face. There are also several multiplayer options: Up to four people can play via split screen on the same Mac, and as many as 32 can join an Internet game.

The controls are simple. A heart monitor in the upper right displays your status, and power-ups keep you healthy as you shoot bad guys and rack up points by collecting coins, gems, and edibles. You get plenty of weapons—electro blasters, pepper spray, flamethrowers, missile launchers, and even an icy frostbiter. You can avoid going back to the start when you die by touching checkpoints along the way to save your progress.



A TWO-RABBIT RACE MAKES for awesome arcade action and addictive gameplay for all ages.

OK, so it's a sidescroller, and these days that seems old fashioned. But it works. The graphics are vivid and charming, the sound effects are cool, the music is upbeat—it's addictive fun. Jazz and Spaz seem to be geared more toward the teen and younger market than to hard-core players. So parents can relax: While there's violence aplenty, it's all of the harmless cartoon variety.—*John Lee*

GOOD NEWS: Bright, colorful graphics. Cool special lighting effects. Great sound. Fun-to-play arcade action. **BAD NEWS:** Gameplay gets repetitive over time.





Virtual Game Station 1.2

FUN & GAMES

COMPANY: Connectix

CONTACT: 800-950-5880, <http://www.virtualgamestation.com>

PRICE: \$49.95 (SRP)

REQUIREMENTS: Factory-original G3, Mac OS 8.0 or later, 10MB of free RAM, 3.5MB of hard disk space, CD-ROM drive, recommended PlayStation titles (see current list on the VGS Web site), ADB or USB game controller highly recommended

Before Steve Jobs made a decided effort to bring cool new games to our favorite platform, Mac gaming could best be described as dismal. However, things took a decided turn for the better when Connectix released Virtual Game Station (VGS). This unique software single-handedly expanded the Mac's library to include more than 200 popular games developed for the Sony PlayStation.

VGS allows any factory-original G3 with standard ATI graphics hardware (including all iMacs and the new G3 towers) to work with any compatible PlayStation game. Installing VGS and updating the ATI drivers takes only about five minutes. The emulator runs well with about 10MB of RAM, so you don't really need a beefed-up Mac to enjoy some of the best games.

After installation, the AutoLauncher extension launches VGS whenever you place a PlayStation disc in your CD-ROM drive. However, don't try using a pirated or non-North American title, as VGS will spit it back out at you. Both newbie and hard-core gamers will appreciate its simple preferences menu and awesome controller setup menu, which uses InputSprockets—Apple's API for peripherals—to configure any

NO, IT ISN'T PRISON GUY—it's Stone Cold Steve Austin in WWF Warzone!

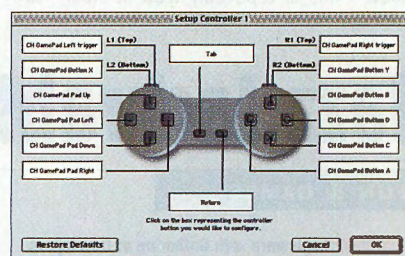
controllers you connect to your Mac. For example, both an ADB CH GamePad and a Gravis GamePad Pro USB worked flawlessly on our machines with all the Connectix-tested games we ran. If you have only one joystick, VGS lets a second player use the keyboard; we recommend using the number pad and arrow keys for the easiest control.

After setting the preferences, including an option to play movies in millions of colors instead of the regular 256-color PlayStation range, players will no doubt want to pop in their favorite game. With 200-plus compatible titles (and the list is growing), odds are yours will work. Connectix has accomplished a slick engineering feat with this bona fide PlayStation emulator. We tested VGS with a variety of games: Gran Turismo, Jet Moto 2, Bio Freaks, Tenchu Stealth Assassins, Final Fantasy VII, NHL '98, and WWF Warzone. All of the approved games played wonderfully, and some not listed on the VGS Web site worked as well. The only performance hiccups occurred when VGS hadn't accessed the CD in a while and stopped to spin up the disc to read data, but this caused no more than a second's delay.

If saving \$60 over the cost of a PlayStation isn't incentive enough, consider this reason to purchase VGS: memory cards, which cost about \$15 each and allow you to do such things as save games in progress and create custom football players in GameBreaker '99. VGS lets you put



as many memory cards on your Mac as you want. Connectix also added the ability to import and use DexDrive data, which previously you could access only in a PC DexDrive (a PC-only peripheral just for Nin-



TO CONFIGURE CONTROLLERS THROUGH APPLE'S InputSprockets API, you simply click the desired buttons.

tendo64 and PlayStation memory cards). You can now download DexDrive data from the Internet and even trade data files with other VGS users over the Internet. Unfortunately, you can't transfer the contents of your own VGS memory cards to a DexDrive or to a PSX memory card, so you can't give saved games to your buddies who use a PC or a PlayStation.

Apple is working hard to make sure that future games are actual Mac applications. In the meantime, we can be happy campers with VGS.—*Erik J. Barzeski*

GOOD NEWS: Games, games, games—the Mac gaming library has exploded. Great graphics. Good support of Apple's InputSprockets. Supports 24-bit color movies. **BAD NEWS:** Can't play all games. Sound cuts in and out in certain games.



CLEAR OUT THAT PUCK! Electronic Arts hasn't yet developed any sports games for the Mac, so just grab one of its many PSX titles.



IT AIN'T BRAGGING IF IT'S TRUE.

(AT THIS RATE WE'RE GOING TO HAVE TO THINK OF SOMETHING ELSE TO CALL THEM BESIDES CRITICS.)

OF COURSE, WE'RE ONLY REPEATING WHAT THE EXPERTS ARE SAYING. CAN WE HELP IT IF THEY GO ON AND ON ABOUT OUR REVOLU-

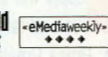
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TRANSPARENCIES? IS IT OUR FAULT THEY'RE SMITTEN WITH CANVAS 6'S KNACK FOR CUT-AWAYS, VIGNETTES AND COLLAGES? WE'RE STILL BLUSHING OVER THE RAVES FOR ITS SNAZZY CUSTOMIZABLE INTERFACE, IMAGE EDITING AND EASE OF USE. GRANTED, WE COULD HAVE KEPT ALL THIS TO OURSELVES. BUT THEN HUMILITY CAN BE HIGHLY OVERRATED.

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Ionizer 1.3

AUDIO

COMPANY: Arboretum Systems

CONTACT: 800-700-7390 or 650-738-4750, <http://www.arboretum.com>

PRICE: \$499 (SRP)

REQUIREMENTS: PowerPC 120MHz or faster (200MHz recommended), System 7.6 or later, 16MB of RAM, 8MB of free hard disk space, CD-ROM drive

No matter how carefully you record or create digital audio, it always needs noise reduction, compression, limiting, special equalizing for the system that plays it, or a new sound to match previous recordings. Ionizer 1.3, a multipurpose postproduction audio plug-in with an innovative interface, does all those tricks—and more—exceptionally well. It belongs in the arsenal of sound designers, composers, producers, sound effects and mixing engineers, or anyone who needs specific control of sound frequencies.

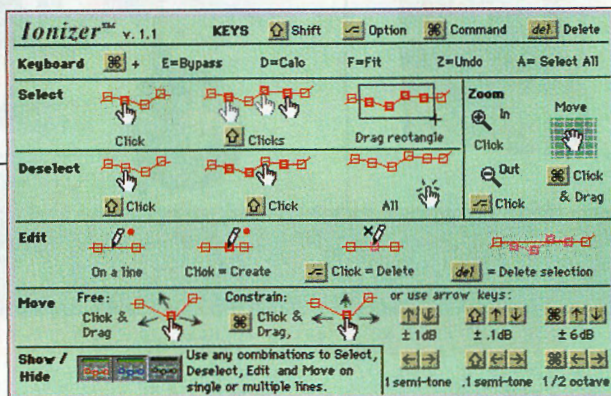
This Mac-only plug-in operates from within any Premiere- or AudioSuite-compatible application. If you don't have an audio-editing program, the Ionizer CD includes Hyperprism, which allows you to do basic sound editing, run Ionizer on different sections of the same file, and hear disk-based previews of unlimited length. You can also use it in play-through mode (in the same way that a hardware effect device like a compressor box does) without affecting the original sound file.

Ionizer has a unique interface that takes a little getting used to. There is a red line, or Red Curve, as the program calls it, and a Blue Curve. These determine which part of the frequency and dynamic range of your

sound changes. Anything beyond the Blue Curve receives the full amount of processing; the area between the curves gets processed relative to where the signal falls between the Curves. For example, a signal halfway between the two Curves gets 50 percent of the boost or attenuation, which is represented by the Black Curve. Since each of the Curves can affect up to 512 equalization bands, the amount of control is staggering.

Ionizer's ingenious, if complex, interface makes it possible to do multiband compression, expansion, and equalization simultaneously—a very valuable feature. In one pass you can get rid of annoying high-end transients in a vocal mix, compress the signal to reduce extreme dynamics, boost the bass line, and—most important—hear how the settings mix sounds as you change each one. You'd need three separate plug-ins to do that without Ionizer, and you still wouldn't be able to hear setting changes relative to the other plug-ins.

The program's analytical features are a godsend. If you need music to accompany a narrator or vocalist, a unique keying feature analyzes the voice and automatically reduces



CLICKING ON THE QUESTION MARK in Ionizer brings up this helpful screen, which shows you keyboard shortcuts and how to adjust the Curves.

competing frequencies so that you can keep the level high enough to hear your accompaniment without drowning out the voice. Take an instant "fingerprint" of hum or camera noise on your track and easily remove it. Steal the sound of a favorite group and apply it to your own music (see "Commit EQ Theft").

Ionizer 1.3 has some great one- or two-button features such as the Noise button and Automatic Tracking, but its real power comes from its incredible range of customization. We can't think of another single plug-in that performs so many postproduction sound processes so well. It takes time to understand how to use Ionizer, but the investment is worth it.—Judy Munsen

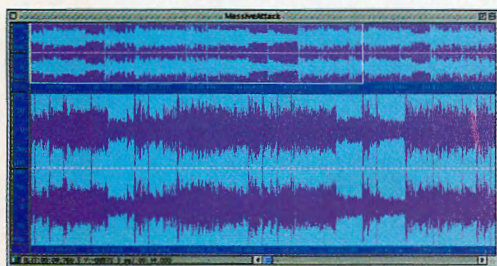
GOOD NEWS: Serious, high-quality noise reduction, equalization, compression, expansion, limiting, vocoding, and frequency morphing plug-in. Well-designed interface. Easy to use for most basic operations. Excellent HTML manual.

BAD NEWS: Big learning curve for those not already familiar with compressor or limiters.

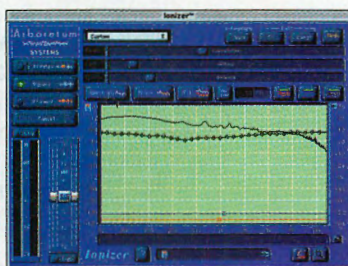


Commit EQ Theft

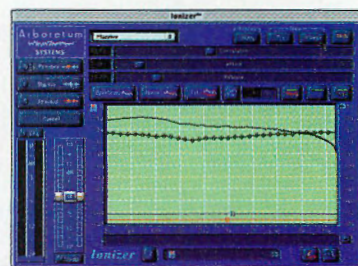
Steal the sonic characteristics of your favorite group and use it in your own music. Ionizer 1.3 analyzes 512 different equalization bands and determines how much is boosted or cut in each. You can then apply that calculation to your own music.



1 Find a part of a CD track similar to the sound you're looking for and import it into your audio editor or Hyperprism. We've used a few bars of Massive Attack's "Mezzanine" track. Select all the audio in the editor.



2 Open Ionizer and turn on Bypass. Click Spectrum to calculate the audio's frequency profile. Move the Red and Blue Curves to the bottom of the screen, with the Blue above the Red. Save and name this as a preset.



3 Open the sound file to which you want to apply the filched equalization. Select the file and launch Ionizer. Press the Morph button. Press Preview to hear your creation. Click Process, quit Ionizer, and save the new sound.

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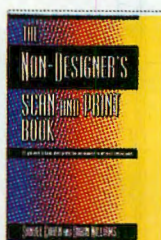
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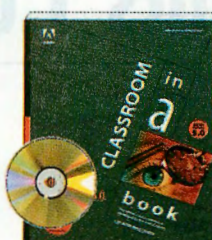
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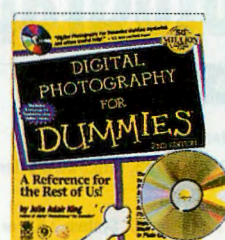
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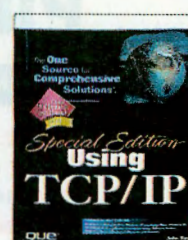
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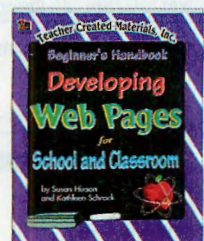
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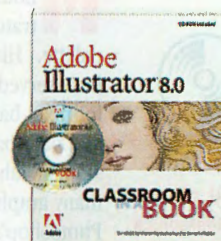
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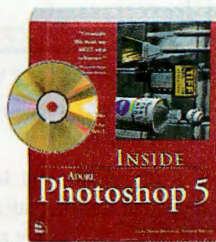
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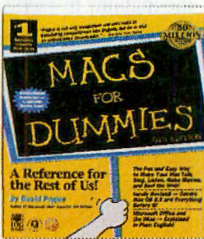
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PhotoGraphics 1.0

DESIGN & GRAPHICS

COMPANY: Extensis

CONTACT: 800-796-9798, <http://www.extensis.com>

PRICE: \$149.95 (SRP)

REQUIREMENTS: PowerPC, System 7.5.5 or later, 3MB of free hard disk space, Adobe Photoshop 4.0 or later

Many graphics professionals consider both Adobe Photoshop and Illustrator vital parts of their electronic palette. Historically, the two applications have served different functions—Photoshop for pixel-based images, Illustrator for vector- and path-based graphics and text. This division of labor isn't always convenient, and many graphic artists have complained about Photoshop's lack of path-based text tools.

There's no need to complain anymore, because Extensis has stepped in to fill a void in Photoshop's feature list. PhotoGraphics is a powerful but easy-to-use Photoshop plug-in that both veterans and novices will like.

PhotoGraphics is very well rounded for a first-generation product. Its interface superimposes itself on top of Photoshop's, essentially acting as a separate application launching within Photoshop. The interface looks and acts like any other Extensis plug-in—polished, accessible, and highly capable.

PhotoGraphics can perform a variety of tasks, but primary among them is creating

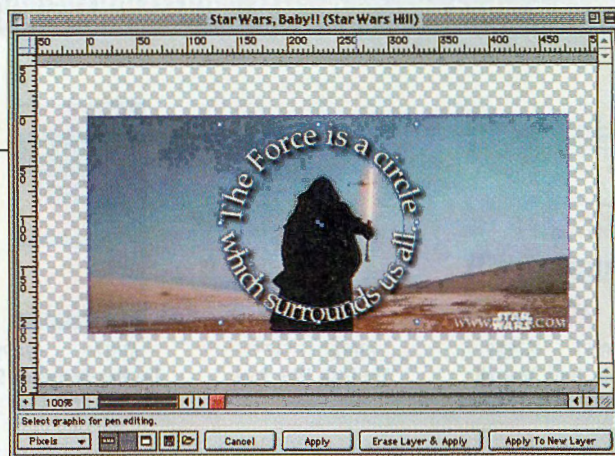
and editing geometrical shapes and Bézier curves. Its simple toolbar allows you to draw rectangles, ovals, polygons, stars, and more. Other tools let you resize or rotate the shapes. The Pen tool, for example, works much as it does in Illustrator and enables you to create complex Bézier curves with minimal effort. The comprehensive manual spends five pages discussing how to create various curves, points, and corners. However, once you deselect a shape or a Bézier curve in PhotoGraphics, you essentially lose the ability to edit it beyond resizing or rotating it: You can't move a point on a Bézier curve, and you can't change the indentation on a star.

Graphics professionals have the ability to create multiple text blocks on any path, with complete independent control over placement and formatting for each block. Options include settings to adjust kerning, baseline, character width, style, alignment, horizontal and vertical scaling, aliasing, and more. All of these options preview in real time. If you can't get your text to look just right, it probably isn't PhotoGraphics' fault.

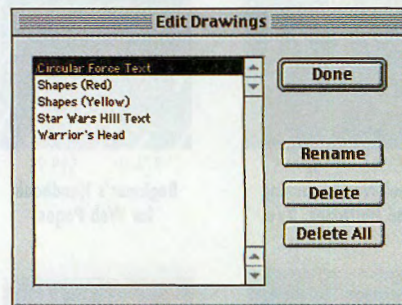
Extending the idea of an application within an application, PhotoGraphics supports layers within itself, allowing you to position your drawings properly, as well as add object-level antialiasing and opacity. It also provides extra workspace for inspired sketching and doodling and comes with other perks that hard-core users will find practical, including keyboard shortcuts for everything, plus a well-written and helpful manual in the form of an Acrobat (PDF) file.

Perhaps PhotoGraphics' niftiest trick is its ability to save what it calls "drawings" within the Photoshop file. Saving a drawing

WITH ONLY TOOLBARS OR PALETTES to manage (the Layers palette doesn't appear here), even the most novice user can maneuver in PhotoGraphics.



A LONG TIME AGO, in a galaxy far, far away, someone said, "Let's give Photoshop text on paths!"



PHOTOGRAPHICS LETS YOU EDIT vector-based drawings, which you can save within a Photoshop file.

in a file allows you to open, reedit, and apply that drawing later. You can open and edit only one drawing at a time, but you can get around this limitation by compositing drawings on different layers. What's even cooler? The program can save drawings in a wide variety of formats other than PSD, including MBP, EPS, JPEG, PDF, PICT, PNG, Scitex, Targa, TIFF, and many more. Email your colleagues a PICT file, and they'll be able to open the drawings tucked inside!

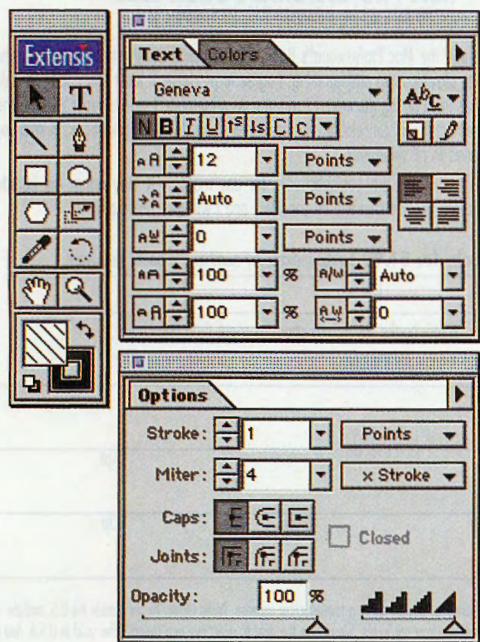
At about \$150, PhotoGraphics is reasonably priced, and it's endowed with great features that may encourage you to ditch Illustrator altogether if you use it only for simple tasks. PhotoGraphics is mature and powerful for a version 1.0 release, although the inability to reedit deselected shapes and Bézier curves means it falls a little short of *Freakin' Awesome*.—Erik J. Barzeski

GOOD NEWS: Finally, text on paths in Photoshop. Advanced text-tweaking capabilities. Variety of shapes. Easy-to-use interface.

BAD NEWS: You can't reedit shapes or Bézier curves after you've deselected them.



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Opus 1.6

AUDIO

COMPANY: Sincrosoft

CONTACT: 39-2-76020403, <http://www.sincrosoft.com>

PRICE: \$499 (SRP), \$99 competitive upgrade, \$199 academic price

REQUIREMENTS: 68040 or faster (PowerPC recommended), System 7.0 or later, 8MB of RAM (16MB recommended), CD-ROM drive, 13-inch or larger monitor

Professional music notation software has been around for a long time. Unfortunately, getting it to do what you want can be a complicated, unruly, and frustrating proposition. Sincrosoft has introduced a program that refines the process. Opus 1.6 makes basic functions easier and elaborate adjustments more intuitive than other high-end notation applications such as Passport Designs' Encore or Coda's Finale. However, we can't give Opus a solid recommendation for several significant reasons.

But first the good stuff. Setting up your virtual score in Opus is a snap (see "It's an Easy Score [Finally]," below). You can enter notes via a MIDI keyboard, by using note-value computer-keyboard shortcuts, or by selecting note symbols and dragging and dropping them onto the score. Automatic spacing functions keep everything neat (you have the option of changing or overriding them). You can fully customize every parameter, including 10 different ways to display tuplets for six time signature options. You can create a score of any dimension and easily set up pages in any configuration you choose. Opus comes with hundreds of symbols, from the centuries-old traditional notation conventions

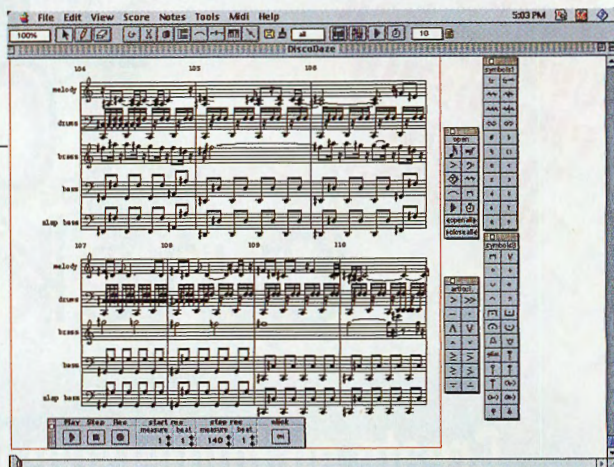
to the eclectic representations of 20th-century music.

OMS (Open Music System), included on the software CD-ROM, accesses the instruments in your studio for recording and playback. MIDI playback supports QuickTime, so you can listen to scores or MIDI files without having to use any external MIDI equipment.

We downloaded several popular MIDI files from the Web and opened them in Opus 1.6 to see what the scores looked like. Because Opus doesn't support Type 0 MIDI files, not all of the files opened. However, you can convert Type 0 to Type 1 if you have a sequencer that supports both formats.

Most of Opus 1.6's features are fairly intuitive to use. That's good because if you should need help, reading the printed manual can be frustrating. It has no index, and its table of contents is incorrectly numbered.

Our other quibbles are that chord symbols aren't implemented; lyric entry, though exquisitely customizable, is slow and awkward; and playing and stopping a score is



HERE'S A MIDI FILE DOWNLOADED from the Web, then shown as a score in Opus 1.6. You can customize the eight icons in the middle of the toolbar at the top of the page. Four of the nine available icon palettes appear on the right.

a sluggish function, even when no other applications are running.

Because of these problems, we can't wholeheartedly recommend Opus 1.6. But if you need a tool for printing scores or publishing music, Opus is still the easiest one to use. The current state of professional music notation software is quite stale; until major developers revamp their product lines, Opus is a marginally decent pick of an unremarkable crop.—Judy Munsen

GOOD NEWS: Comparatively easy to use. Extremely customizable and flexible. Printed manual.

BAD NEWS: No chord symbol features.

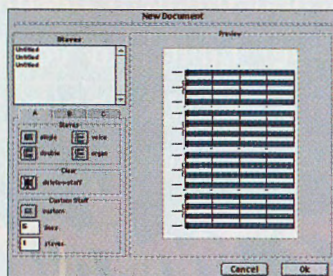
Sluggish operation. Won't open Type 0 Standard MIDI files. Lyric entry isn't automatic enough.

Manual lacks an index and has an incorrect table of contents.

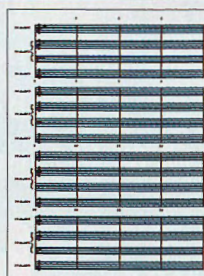


It's an Easy Score (Finally)

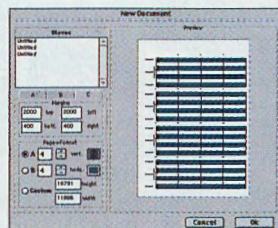
When you open a new document window in Opus 1.6, you just have to make a few choices, and voilà! You're ready to score.



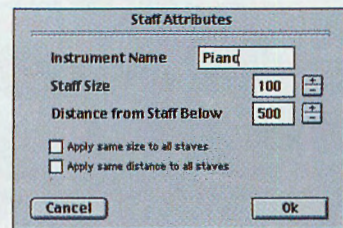
1 Decide how many parts, or staves, you need. Click on the Single icon for a melody, Double for a two-staved piano track, and Single again for a bass part.



2 Set up how you want to connect your staves. Define the number of staff systems and of measures per system.



3 Determine margin settings and format your page. (The defaults work well.) Click OK, and the first page of your score appears.



4 Double-click one of the untitled staves to bring up the Staff Attributes dialog box, where you name the instrument. Set tempo, time signature, and key from the Score menu.

reviews

MarkzTools III 7.3

DESIGN & GRAPHICS

COMPANY: Markzware

CONTACT: 714-756-5100,

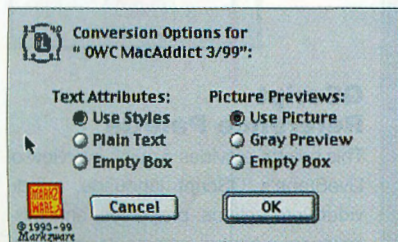
<http://www.markzware.com>

PRICE: \$199 (SRP)

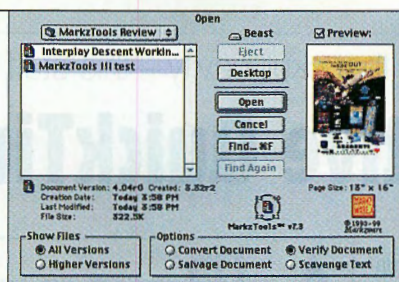
REQUIREMENTS: 680X0 or PowerPC, System 7.1 or later, 8MB of RAM, QuarkXPress 3.1 or later

MarkzTools III is a QuarkXPress Xtension that gives you, among other things, the ability to convert higher-version XPress documents from within your lower-version software. Seven modules compose this Xtension, which you simply place in your XPress Preferences folder and then activate from the Utilities menu. With them you can convert your document to another version, salvage damaged or corrupt files, and verify the integrity of your saved documents. You can also make temporary copies of your work in case of a system crash during a save, extract text from very badly damaged files, convert image previews to grayscale pictures (in the interest of keeping file size down while preserving the ability to update to your actual images), and set your preferences to give a warning if you are about to save a document in another version.

MarkzTools' Conversion module allows you to open QuarkXPress 4.0x documents from any 3.x version, so you won't have to invest in 4.0 if you're happy running an earlier version. The Verification module tells you whether a file is corrupt. If it is corrupt, however, the module doesn't give you any details about the nature or extent of the problem. With the Salvage module, you can select how you want the text and images saved in an attempt to recover your files, but as with the Verification module, MarkzTools III gives you no additional information



THE CONVERSION OPTIONS SETTING lets you select text and image attributes in a converted or salvaged document.



THE VERIFY WINDOW ALLOWS YOU to check, convert, salvage, and scavenge for text in the effort to preserve your documents.

regarding the problem areas. If your document is severely damaged, you can elect to use the Scavenge Text module in hopes of recovering at least the text.

The Verify When Save and Save To Temporary features are especially valuable. Verify When Save lets you check your document's integrity upon saving and can automatically update a lower-version document to your current XPress version. The Save To Temporary feature corrects the way XPress saves files. Unlike other applications, QuarkXPress does not save to a temporary file that it renames once the save is successful—it saves and overwrites the original file. So if your computer suffers a crash while a save is in progress, you risk losing or corrupting your XPress files. MarkzTools' Save To Temporary writes and verifies the temporary file before renaming the new one. If your system crashes, you won't lose the whole file, and your last saved version remains intact.

Make sure you have or download version 7.3 of MarkzTools III (available free to 7.0 owners at Markzware's Web site). Version 7.0 is very buggy and prone to crashing Xpress, and can cause printing problems.

If you regularly use QuarkXPress, MarkzTools III is a lifesaver. Even if you can't recover everything, MarkzTools III gives you the means to salvage some of your effort rather than starting completely from scratch.—*Susan Meredith*

GOOD NEWS: Allows conversion of higher-version XPress files from within lower versions. Can save you from having to rebuild corrupt files from scratch. Show Version and Available Memory features are useful. **BAD NEWS:** Gives no details about corrupt files. Tech support is fair at best.



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how to

Hope you got some room in that skull cavity—this stuff will grow your brain

Build Interactive QuickTime Movies

by Mark Simmons



When it comes to Web multimedia, you can only do so much with animated GIFs. In the last couple of years, lots of products and technologies aimed at the enterprising Web designer have come out, promising to enable the creation of interactive widgets, flashing highlights, synchronized music and sound effects, and sophisticated animation. Java and Macromedia Flash are now perhaps the most popular such solutions, but there's a new kid on the block—one that's approachable yet powerfully programmable, is light on the bandwidth, and doesn't require users to set off on a plug-in scavenger hunt: All you need is QuickTime 3 and Apple's standard-issue QuickTime browser plug-in.

The magic ingredient that taps this hitherto-hidden power of QuickTime is Totally Hip Software's LiveStage, a nifty new authoring tool unveiled at January's Macworld Expo. The program takes advantage of QuickTime's support for "sprites"—independent objects that can move to and fro within QuickTime movies and respond to user events such as mouse clicks. Any Mac or Windows user with QuickTime 3 can view and explore QuickTime movies made in LiveStage.



OUR SAMPLE PROJECT SHOWS YOU how to create the ever-popular rollover effect, which highlights a button and plays a sound when someone mouses over it.

And when embedded in a Web page, these movies will play back via the standard QuickTime plug-in.

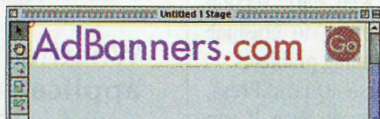
To help you get your feet wet with the powerful LiveStage, we're going to show you how to create a fancier version of the ad banners found on many Web sites. You can follow along with the demo version of LiveStage (on The Disc), which lets you export QuickTime movies but not save projects; we'll keep the exercise short so you can finish it in one sitting. The full package retails for \$199.95 (604-685-6525, <http://www.totallyhip.com>) and comes with a QuickTime 3 Pro registration and a copy of Totally Hip's WebPainter animation tool.

The Lay of the Land in LiveStage

Before we begin, let's take a quick tour of LiveStage's interface. In addition to the main window in which you arrange the elements of your multimedia masterpiece, you'll be working with an object-manager window and a couple of handy floating palettes. Here's the scoop on each of these tools.

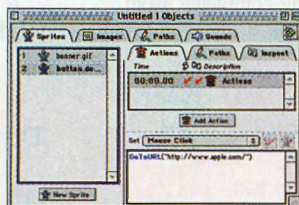
Stage Window

This is where you'll build your movie, dragging images from the Library palette into the stage area to create sprites. The tools on the left let you select, move, rotate, stretch, and skew your sprites.



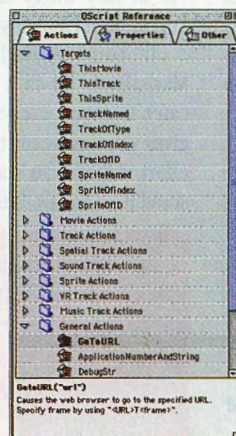
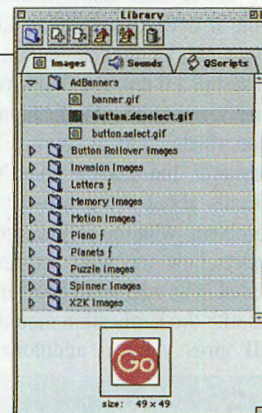
Objects Window

This tab-packed object manager allows you to peruse and twiddle your sprites, images, motion paths, and soundtracks. The Sprites tab is the most complex of these tabs, but for the most part you'll be concerned only with the lower right quadrant of the window, where you enter scripts that respond to events and user actions.



Library Palette

You use this palette to import and store images, sounds, and scripts for your LiveStage projects. You can group stored items into folders for browsing convenience.



QScript Reference Palette

This palette provides a quick overview of LiveStage's QScript language, subdivided into actions, properties, and miscellaneous control statements and operators. You can click a term for a brief explanation, or drag it into the script-editing area of the Objects window.



TOUGH
This stuff's for the pros.



TRICKY
It'll take some effort, but you can do it.



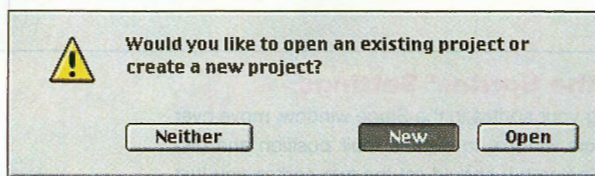
EASY
The fundamentals, if you will.



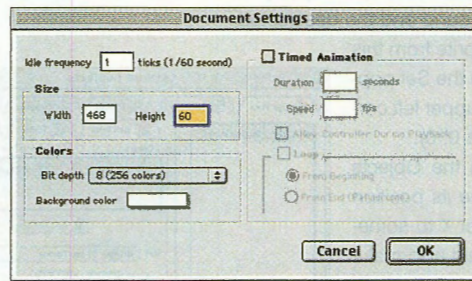
FIND QUICKTIME 3, a demo of LiveStage, and our sample projects and movies on The Disc.

1 Begin the Project

When you launch LiveStage, it asks whether you'd like to open an existing project or create a new one; choose the latter option. You'll then see a Document Settings dialog box, where you enter the dimensions, color settings, and animation parameters of your project. For our sample exercise, we'll be creating an advertising banner, so in this case choose 468 pixels wide by 60 pixels tall (standard ad banner size). Click the background color box and set it to pure white, then drop the bit depth to 8 bits for economy's sake. Your banner won't feature timed animation, so leave this box unchecked. Click OK, and the empty Stage and Objects windows will appear.



**LAUNCH
LIVESTAGE
and start a
new project...**

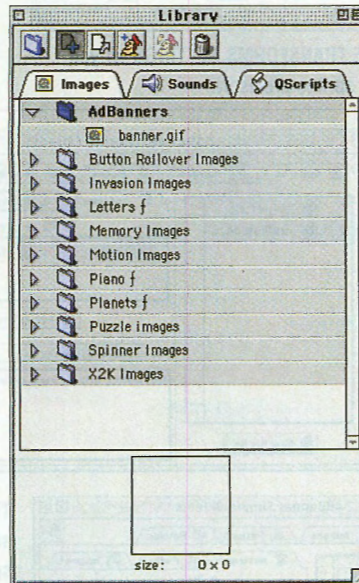


...then enter the document settings as shown here.

2 Stock Your Library

Now you need to gather your images and import them into LiveStage's Library palette. (If it's not visible, select Show Library Window from the Windows menu.) We've prepared prefabricated GIF images on The Disc, but you can create your own graphics in a program such as Adobe Photoshop; LiveStage works with just about any format—including TIFF, JPEG, PICT, PNG, Photoshop, and WebPainter files.

Create a new image folder by clicking the leftmost button along the top of the Library palette, then highlight this folder and import each of your images in turn by clicking the Add Items button (second from the left). For our sample project, you'll need to import the images banner.gif, button.deselect.gif, and button.select.gif—the ad banner background and the clickable button in its regular and selected modes.



THE LIBRARY PALETTE'S BUTTONS
allow you to create folders and import your images.

AdBanners.com

BANNER.GIF, our ad banner background image.



BUTTON.DESELECT.GIF,
our button in its normal
deselected form.

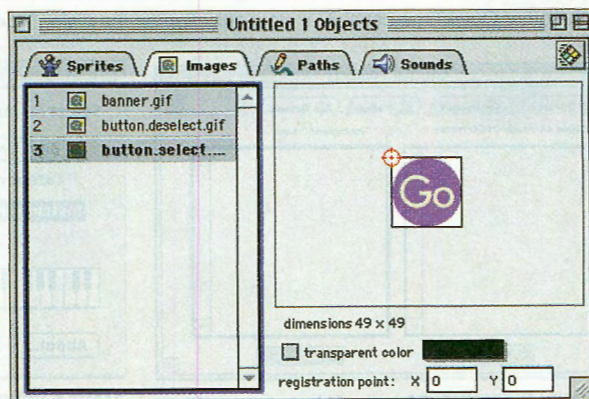


BUTTON.SELECT.GIF,
our button in its
highlighted form.

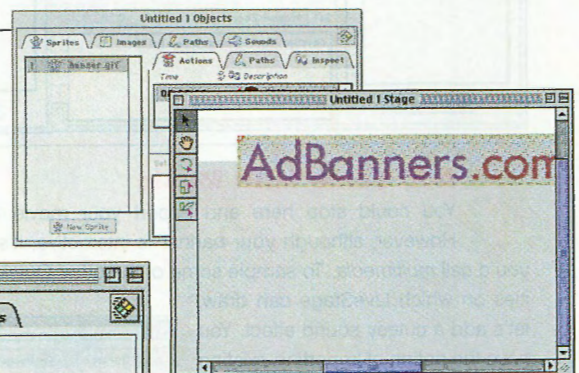
3 Place the Sprites

Now that you have your images at hand, you can go ahead and turn them into sprites. The simplest way to do this is to drag them out of the Library palette and into the Stage window, at which point LiveStage adds them to the list of sprites in the Objects window. You can then position the sprites by dragging with the mouse, nudging with the arrow keys, or selecting Image Transforms from the pop-up menu in the Objects window and entering X and Y values.

You'll need to create two sprites for our ad banner sample, using the banner background and deselected button images. Place the banner background sprite at the upper left corner of the Stage area, and put the button sprite over on the right end of the banner. (Don't worry about precise positioning—we'll tweak this in the next step.) Finally, you'll need a third image of the selected button. You won't be using it as a separate sprite, so don't place it on the stage. To make it available for your project, click the Images tab in the Objects window and add the selected button image to the list.



TO ADD SPARE IMAGES, drag them to the Objects window's Images tab.

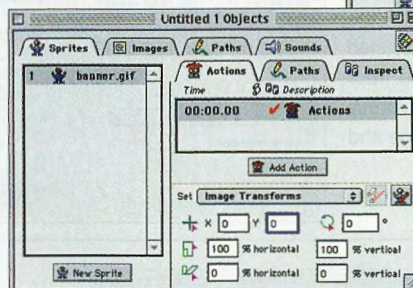


CREATE SPRITES by dragging Library images onto the Stage area.

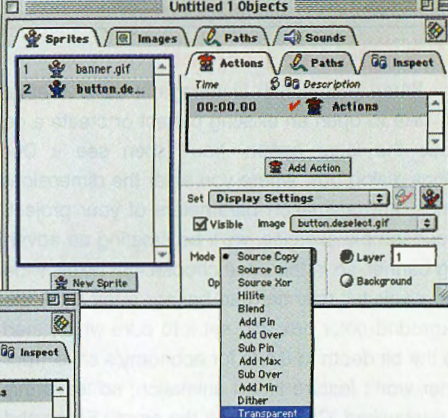
4 Tweak the Sprites' Settings

After placing your sprites in the Stage window, move over to the Objects window to tiddle their position and display settings. The Sprites tab should list the two sprites you just created—namely, the ad banner background and the deselected button. Select the banner background sprite from this list, then choose Image Transforms from the Set pop-up menu and position the banner at the upper left corner of the Stage area (at the coordinates 0, 0).

Now choose the button sprite from the Objects window list. If you like, you can fine-tune its position using the Image Transforms settings (set X to somewhere around 413 and Y to 5). You should also make the button image transparent; choose Display Settings from the Set pop-up menu, select Transparent from the Mode pop-up, and click the OpColor box to set the transparency color to white. Any areas of the button that match the OpColor will become transparent.



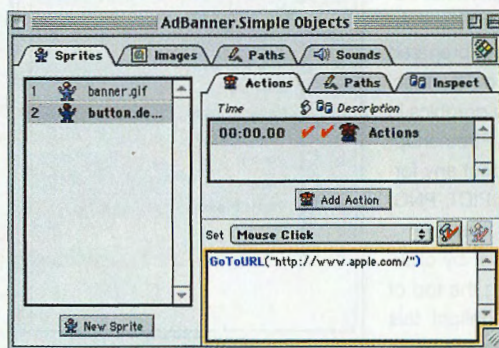
THE IMAGE TRANSFORMS SETTINGS let you place your sprites precisely.



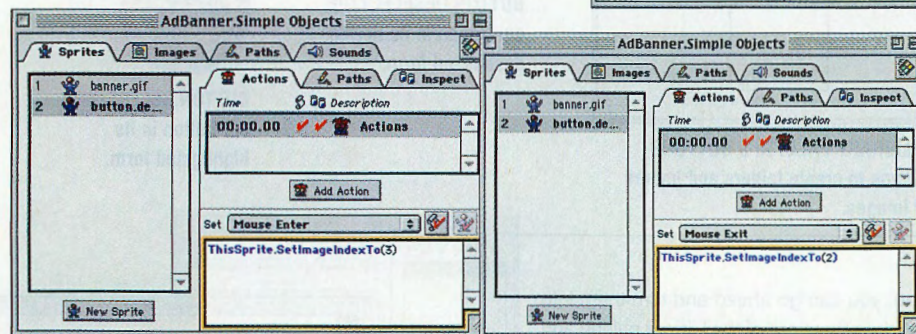
TWEAK THE DISPLAY SETTINGS to make the button sprite transparent.

5 Script a Rollover Animation

Now that you have your pieces in place, you're ready to do some QScripting. To create a rollover effect in which the Go button lights up when someone mouses over it, you'll need to add two scripts to the button sprite. A third script loads a Web site in the browser when a user clicks the button. To attach a script to the button, select it in the Objects window's Sprites list, choose the appropriate event from the Set pop-up menu, and type the QScript code. Shown at right and below are the events you'll need to script and the QScript code to enter.



WHEN A USER clicks the button, the script loads the specified URL. Yes, AdBanners.com is in fact a registered domain—hey, find us one that *isn't*—but it's not in use currently. Your button sends the user to Apple's home page instead.



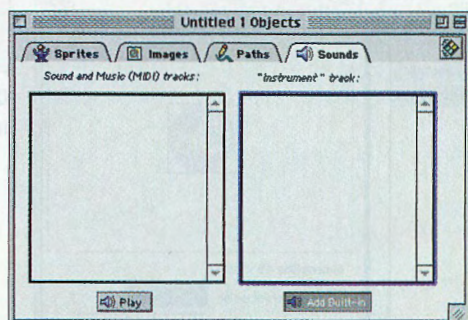
THE MOUSE ENTER AND MOUSE EXIT scripts change the image used for the button sprite; the "ThisSprite" portion of the script directs the SetImageIndexTo action to the sprite itself. The scripts refer to images by index number—this is also the order in which the Images tab lists them. Image 3 is the selected button, and image 2 is the deselected button.

6 Add Some MIDI Music

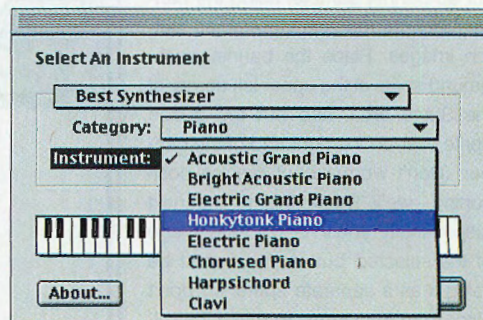
You could stop here and export your movie (see step 8). However, although your banner is interactive, it's not yet what you'd call *multimedia*. To sample some of the other QuickTime capabilities on which LiveStage can draw, let's add a cutesy sound effect. You have the option of importing existing audio files, but for the ultimate in low-bandwidth noisemaking you can add a MIDI instrument track and have your movie play notes using QuickTime 3's built-in selection of synthesized instruments.

To do this, you'll first need to add an instrument to your movie's instrument track. Switch to the Sounds tab

of the Objects window and click the Add Built-In button. In the resulting dialog box, select a musical category and instrument (you can try out your selection on the dialog box's keyboard widget).



ADD MIDI INSTRUMENTS in the Objects window's Sounds tab.



SAMPLE YOUR CHOSEN INSTRUMENT on the dialog box's virtual keyboard.

7 Make the Button Sing

Now that you've chosen your instrument, you can play notes on it by adding a line of QScript to the appropriate button event. For example, to play a brief tone when a user mouses over the button, add this command to the script for the Mouse Enter event:

```
TrackOfIndex(2).PlayNote(1,0,55,127,200)
```

This tells the instrument track (which has an index number of 2) to play a note on your first instrument with a delay of 0, a pitch of 55, a volume of 127 (the maximum), and a duration of 200. Delays and durations are multiples of the idle frequency you chose when you created your project—one tick, or 1/60 second, is the default idle frequency. Finally, run or export your music-enhanced movie to see and hear the results.

8 Export a Wired Movie

And that, believe it or not, is everything you need to make a wired movie containing a button that highlights and a Web link. You can test your work by choosing Run Wired Movie from the File menu, then save it by choosing Export Wired Movie. (You can't save projects with the LiveStage demo, but it does let you export movies from your unsaved project.) You can view the exported movie in Apple's MoviePlayer or any other QuickTime-savvy application.

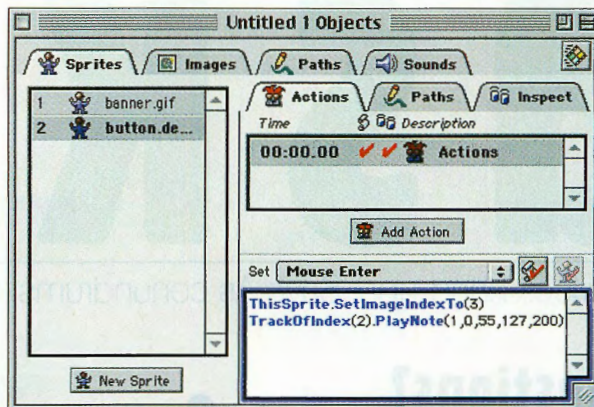
You can also embed your wired movie in a Web page, where anyone who has QuickTime 3 and version 2.0 of Apple's QuickTime plug-in may view and enjoy it. At less than 5K in size, the bandwidth requirements of our admittedly plain example are downright modest. Here's the HTML snippet you need to display it:

```
<EMBED SRC="mymovie.mov" HEIGHT=60 WIDTH=468  
PLUGINSOURCE="http://www.apple.com/quicktime/download"  
CONTROLLER=FALSE AUTOPLAY=FALSE>
```

More Fun with LiveStage

While we've covered a few of LiveStage's capabilities in this how-to, we've just scratched the surface. Besides offering more than 100 additional QScript commands, the program also lets you import WebPainter vector graphics; create timed animations in which the position, appearance, and behavior of sprites change over time; and create custom events so that sprites can send messages to each other. The demo on The Disc, along with the accompanying manual, will help you get started with this complex but powerful program.

For an example, look on The Disc for another banner we made with LiveStage called Advanced AdBanner.mov. Our goal was to subvert the ad banner paradigm by programming our button to squirm away before anyone can click it. A user mousing over the button has only a fraction of a second to click it before the button teleports away to a random area of the banner. Thus we train the hapless surfer



ADD ONE LINE OF CODE to the Mouse Enter event, and your button beeps fetchingly.



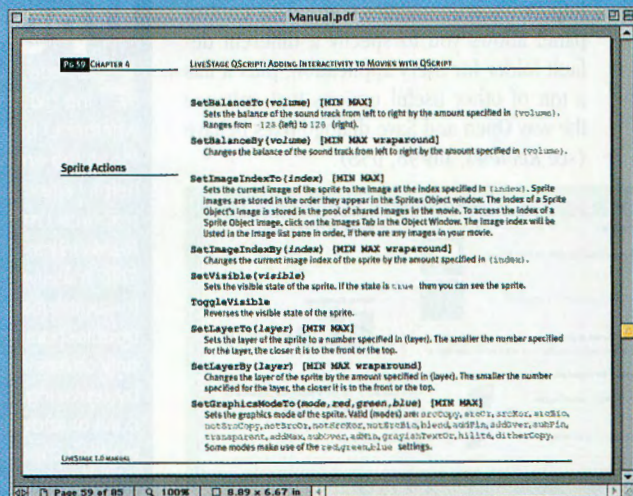
NOW THE WHOLE WORLD CAN ENJOY your fully interactive banner in a regular Web page.

AdBannerGo.com

AdBanners.com

OUR TRICK AD BANNER MOVES THE BUTTON whenever a user is about to click on it. How devious!

never to click on ad banners, thereby collapsing the economic foundation of online publishing. Ha ha ha ha! You'll find a LiveStage project file and concise instructions on The Disc.



LIVESTAGE'S ADOBE-FORMATTED MANUAL includes detailed explanations of each QScript command.



ask us

Sherlock hang-ups, Save As conundrums, and App Switcher annoyances resolved.



FIND ULTRA-FIND and a demo of Action Files on The Disc.

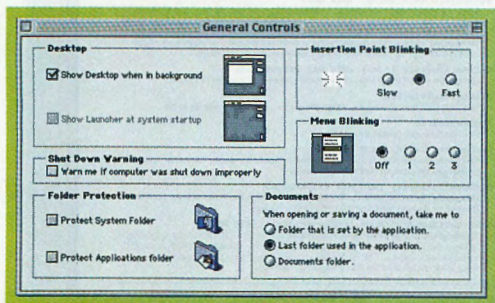
Questions?

Submit technical queries or helpful tips directly via email (askus@macaddict.com) or c/o MacAddict, 150 North Hill Dr., Suite 40, Brisbane, CA 94005.

Q Back in the days of System 6, when you chose Save As from the File menu the default save folder was always the same folder as the one in which the application resided. That suited the way I work very well, and it doesn't seem to be an option in Mac OS 8. Is there any way to get it back?

A Open the General Controls control panel and take a look at the Documents radio buttons in the lower right corner. These determine the default location in Open and Save dialog boxes. The one you want to select is "Folder that is set by the application." Of course, this setting determines only the default location shown in Open and Save dialog boxes; you can choose a different location manually once the default appears.

For even more control, pick up a copy of Action Files from Power On Software (\$39.95, 800-344-9160 or 330-735-3116, <http://www.actionutilities.com>). This control panel allows you to specify a different default folder for every application, plus it has a ton of other useful options that enhance the way Open and Save dialog boxes behave (see *Reviews*, Jul/98, p58).



THE DOCUMENTS RADIO BUTTONS in the General Controls control panel determine the default folder used in Open and Save dialog boxes.

Q I want to know whether my PowerPC-based Performa is considered a Power Mac. I know it has a PowerPC 603e chip, so why don't any Mac product manufacturers list it along with other Power Macs? What gives? Is it such a crappy machine that nothing is compatible with it?

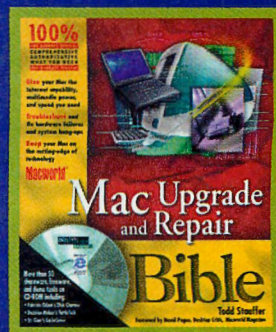
A Apple has produced so many different Mac models in various lines (Performa, Centris, Quadra, and so on) that it's virtually impossible for vendors to list them all by name. As far as meeting basic system requirements, any Macintosh with a PowerPC chip is considered a Power Mac, even if Apple calls the model something else, such as a Performa or a PowerBook, or even if you've upgraded an old 68000-based machine with a PowerPC motherboard. If a vendor thinks its product needs a particular type of PowerPC processor (such as a 200MHz PowerPC 604e or better), it usually specifies that in the system requirements.

Q I recently updated to Mac OS 8.5. I use Adobe Illustrator quite often and use the keyboard shortcuts almost daily. Since updating, whenever I press Control-Tab in Illustrator 7.0.1, instead of giving me the hollow arrow cursor as it used to, the Mac OS switches me out of Illustrator and into another open application or the Finder. I am so used to pressing Control-Tab for my pointer that I am thinking about reverting to Mac OS 8.1. How can I rid my computer of this problem?

A Upgrading is a double-edged sword. Sometimes improvements such as the new Application Switcher in Mac OS 8.5 come in handy. Other times the Command-Tab combo interferes with keyboard shortcuts in various applications. Fortunately, for this particular dilemma there's an easy solution. In the Finder, choose Mac OS Help from the Help menu. Search for Application Switcher and click "Switching

Recommended Upgrade Reference

Perhaps the most common question I get as the Ask Us columnist regards upgrading old Macs. Quite honestly, there is no definitive answer as to how to upgrade or whether to buy a new Mac. Nor is there one particular resource to which I can direct you for all the answers. Certainly the Web offers numerous helpful sites, but I recently discovered a wonderful print resource I'm happy to recommend: *Mac Upgrade and Repair Bible* (IDG Books Worldwide) by Todd Stauffer. This massive 942-page paperback helps you identify the bottlenecks in your system, then plan, perform, and troubleshoot the entire upgrade process. Stauffer not only covers increasing your Mac's raw processing power by replacing the CPU—he also discusses the pros and cons of adding memory, hard drives, input devices, networking capability, and a whole range of peripheral possibilities. At just \$39.99, *Mac Upgrade and Repair Bible* is a lot cheaper and more reliable than most consultants, plus it comes with a CD-ROM loaded with more than 50 useful freeware, shareware, and demo tools.



CHECK OUT MAC UPGRADE AND REPAIR BIBLE for answers to your upgrade questions.

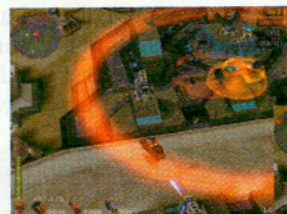
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[continued from page 76]

between open programs," which should be at the top of the list. The window displays information on how Application Switcher works, and if you scroll down, you'll find a diamond link entitled "Help me modify the keyboard shortcuts." Click this and follow the onscreen instructions to assign a new shortcut that doesn't interfere with any of the existing commands in your favorite programs.

Q When trying to use Sherlock's Find By Content feature, I have found that there is no way to specify an entire phrase. If I type in more than one word, Sherlock searches for each word individually, which makes the feature completely useless to anyone who has more than a handful of text documents on their hard drive. Do you know of any way to make it look at a phrase as a whole? I have tried all the usual Web tricks, including enclosing the phrase in quotes, hyphenating the words in the phrase, and putting a plus sign in front of each word.

A Oh, the joys of progress. In System 7.5 through Mac OS 8.1, if you Option-clicked the Name pop-up menu in the Find window, four hidden options would magically appear at the bottom of the menu. By choosing Contents, you could enter a word and have the Mac dutifully go off hunting for any file that contained that word. If you asked it to find more than one word, the Mac looked for only those documents with the complete phrase—not any file that happened to contain one or more of the

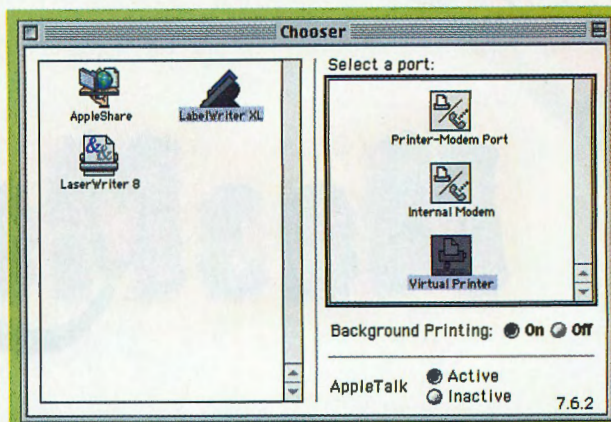
words in that phrase. That's because the Find command was searching for the string of characters, not individual words. Sherlock's Find By Content command, introduced in Mac OS 8.5, works by indexing your hard disk and creating a list of words in your documents. This makes for fast retrieval of documents, but the command can't search for a particular phrase. If you need to find documents by phrases contained therein, I suggest you download a copy of UltraFind from UltraDesign Technology (<http://www.ultradesign.com>). This shareware program can search for combinations of words and phrases, and it even allows you to find documents containing words within a certain proximity of one another. UltraFind really lives up to its name!

Q My Epson Stylus Photo EX printer lacks the option of a network interface. However, I would like to be able to share the printer on an Ethernet network. I know that Apple has Printer Share software for non-networkable Apple printers. Is there anything similar for Epson printers?

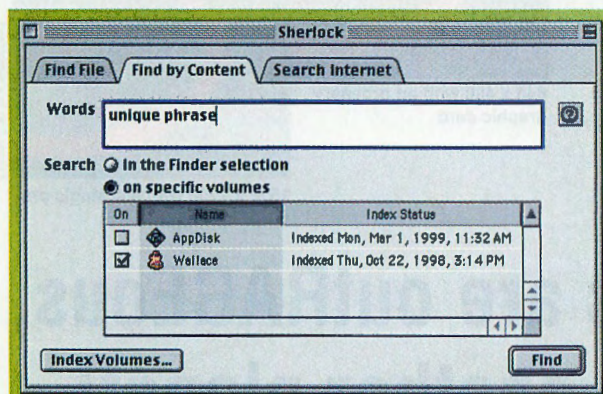
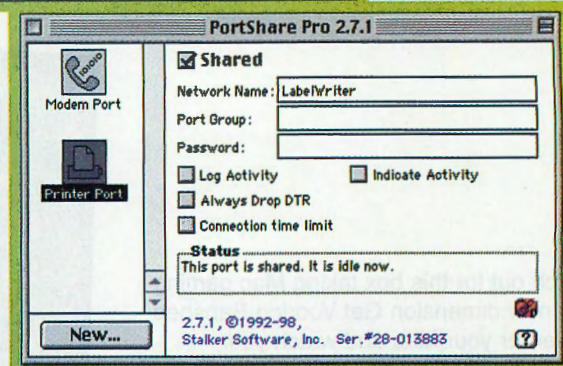
A I've never used an Epson Stylus Photo EX, but from what I could find out about it online (<http://www.epson.com>), the Photo EX is a serial printer that plugs into the printer or modem port on the back of the Mac. Normally only the computer into which a serial device physically connects can use that device, but with the help of PortShare Pro from Stalker Software (800-262-4722 or 415-383-7164, <http://www.stalker.com>), you can share most printers and modems with other Macs on the network. Unfortunately, Epson does something tricky with its newer drivers that prevents the use of PortShare Pro with its printers. Stalker and Epson have been in touch with each other to resolve this problem, so you may want to check back with them to see if they've devised a solution since I wrote this column.

For now, though, your best bet is to pick up a copy of Epson Stylus RIP, Epson's PostScript software for the Photo EX (and several other Epson inkjets). In addition to giving your printer the power to print PostScript files, this \$99 program can turn a Mac into a print server. Once you've done so, you will be able to print to this server from any other computer on an Ethernet network.

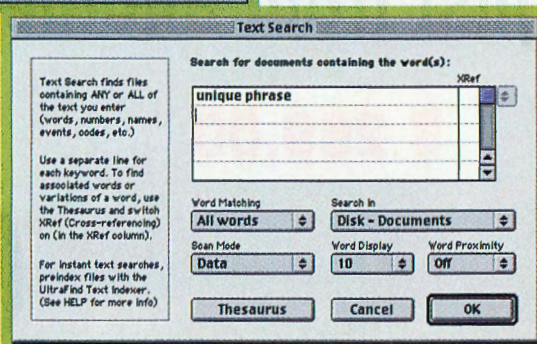
Owen W. Linzmayer is a freelance writer and the author of the recently released *Apple Confidential* (<http://pw1.netcom.com/~owenink/confidential.html>).

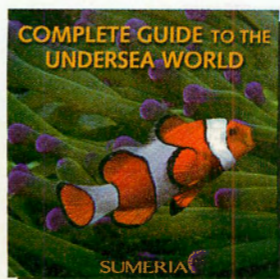


SHARING SERIAL DEVICES ON A NETWORK is easy with PortShare Pro. Just enable sharing on one Mac and then choose the newly networked device on another.



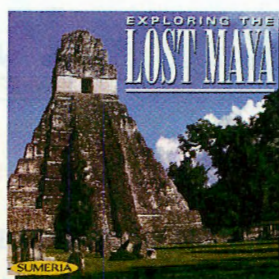
SHERLOCK'S FIND BY CONTENT COMMAND can find only individual words. If you need to locate phrases within documents, UltraFind is the tool for you.





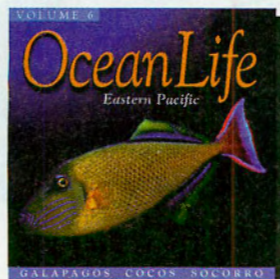
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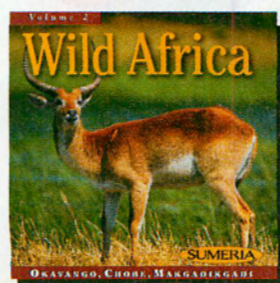
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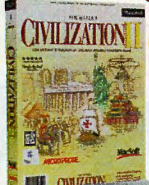
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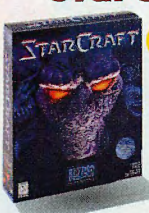
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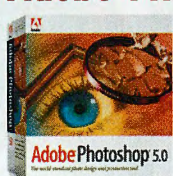


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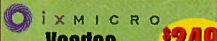
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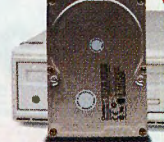
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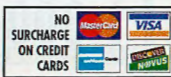
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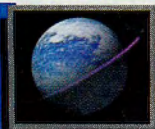
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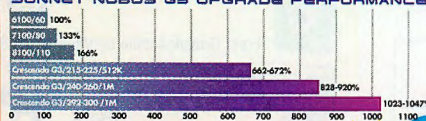
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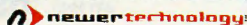


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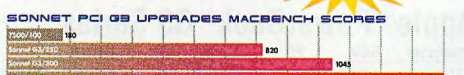
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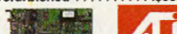
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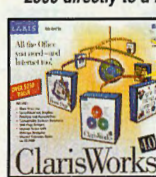
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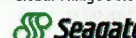
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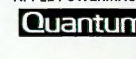


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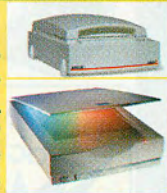
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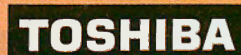
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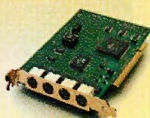
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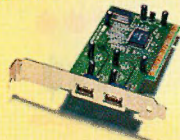
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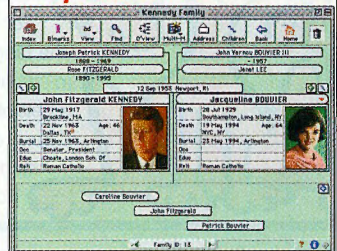
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"Spectacular" MacWorld 1/98



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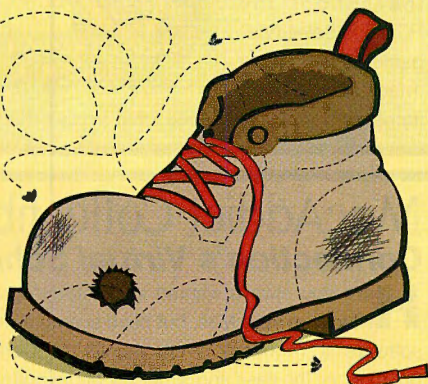
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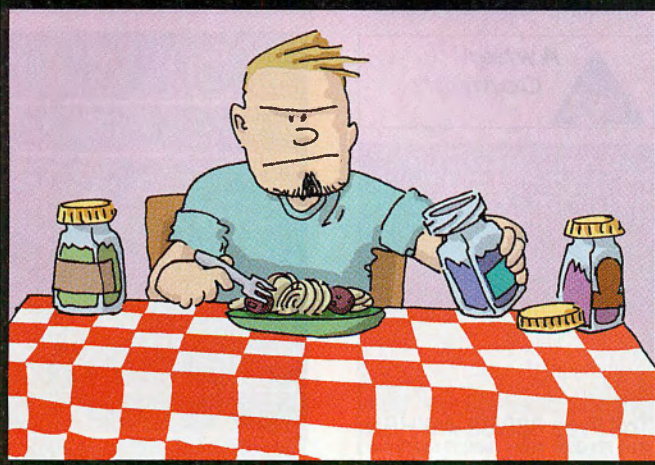
Following in the footsteps of Taco Bell, with its famous Spanish-speaking Chihuahua, Apple has announced plans to replace celebrity spokesman Jeff Goldblum with Fifi, a sexy three-year-old white miniature poodle who speaks French. "The best thing about Fifi is that we can dye her any color we want," an Apple spokeswoman told *MacAddict*. "For example, if we want to promote the tangerine iMac, we can just dunk her in a bucket of environmentally safe, vegetable-based orange dye and put her in front of the camera. Could we do the same thing with Jeff Goldblum? Not according to his agent."

Illustration by A. Vanderhooft

MACADDICT CORRECTIONS

- Last month we misquoted Apple interim CEO Steve Jobs as saying, "Look, you no-brained ferrets, if I want to sunbathe nude in the parking lot while drunk on Jägermeister, that's my business." The quote should have read, "The iMac combines the excitement of the Internet with the simplicity of the Macintosh." We apologize for the error.
- Last month's feature on voice-recognition software was supposed to be about why we think *Star Trek: The Next Generation* is so much better than the original series, but Dave went off on a tangent. We regret the mistake.
- In the opener of last month's digital video feature, we meant to run a gratuitous picture of Rob...oh yeah, we did.
- We intended our March issue to be a fun-filled spring-break spectacular, written aboard our own cruise ship in Mexico and filled with images of drunken, promiscuous college kids. However, MTV beat us to it. Dang.

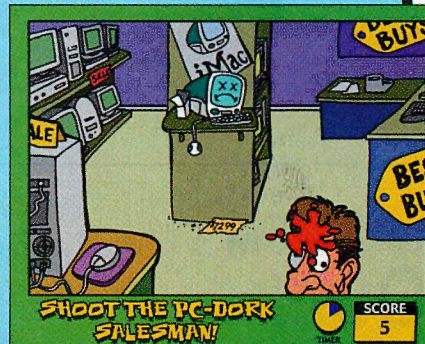
JERRY OPTS FOR THE OPEN SAUCE SOLUTION.



DOODLE BY MARK SIMMONS

SHOP TILL THEY DROP

When the clerks at your local computer store try steering you toward the PC section, don't strangle them with your SCSI cables. Instead, just fire off a few virtual rounds in the "Shoot the PC-Dork Salesman" game at <http://www.macsurfshop.com/frames.html>. You'll never need that stress ball again!



MacAddict Collectibles Connection's Virtual Schmoozer

Have you always wanted to create Hollywood-style special effects on your Mac, but been scared away by the complex software it requires? Well, thanks to Connection's Virtual Schmoozer, the ease and simplicity of big-budget filmmaking has finally come to the Mac! Here's how it works:

1. Pick up the phone.
2. Call your old friend George at the Lucas Ranch.
3. There is no step 3!

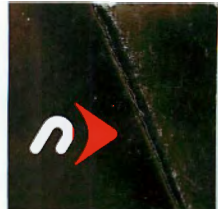
OS X Server Secrets

We took a microscope to the OS X Server licensing agreement and were shocked at what the fine print concealed. Buyers beware...

- A 16 percent gratuity is automatically included for parties of 16 or more.
- Netboot comes bundled with Netsock for added warmth and security.
- Preemptive multitasking will interrupt your regular programming for important announcements.
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PC Stronghold Crumbles

Wall Street was shaken following the announcement yesterday that the International Society of Receptionists Everywhere (ISORE) had dropped the Compaq Presario from its list of favored reception-desk computers in favor of the blueberry iMac. "After all, it's 1999," ISORE president Ursula K. Pitikat told *MacAddict*. "A blueberry iMac at the front desk says, 'We're cool. We're fun. We're alternative.'" Compaq refused to comment, but Steve Jobs was quick to point out, "This is the foot in the door we need to break into the business market."



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